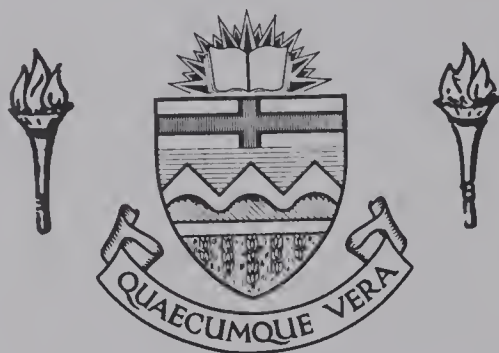


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THE UNIVERSITY OF ALBERTA
NIGERIA'S COMMODITY TRADE:
STRUCTURE AND DIRECTION

by



EMMANUEL FOLAYAN OJO

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE
OF MASTER OF ARTS

DEPARTMENT OF ECONOMICS

EDMONTON, ALBERTA

FALL, 1970

Thesis
1970 F
201

THE UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled Nigeria's Commodity Trade: Structure and Direction submitted by Emmanuel Folayan Ojo in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

International trade is usually described as the engine of economic growth. As economic development is of great concern to Nigeria, I have attempted to analyse the export and import performance of Nigeria, both contentwise and directionwise. The study also examines the determinants of Nigerian exports and imports. Future prospects of the main export products are appraised.

In overall perspective, I have concluded that the prospects for Nigeria's export commodities are fairly bright, the problems they face notwithstanding. Also, I have demonstrated that the behaviour of real income and relative prices provide a useful understanding of Nigerian imports and exports.

Some suggestions are made to enhance the expansion of export earnings through a diversification of both export crops and their geographical distribution. Finally, there is a suggestion that Nigeria should increase the proportion of capital goods in her import content at the expense of consumer goods which are fast being substituted by domestic production.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr. B. W. Wilkinson whose constructive criticisms and untiring assistance contributed tremendously towards the successful completion of this research. Appreciation is also expressed to Dr. A. Buse who was particularly helpful in the econometric analysis.

My gratitude also goes to Professor G. F. MacDowell of Brandon University who created my interest in International Trade before it was stimulated by Dr. B. W. Wilkinson.

I owe a debt of thanks to Dr. W. Hyrak, Documents Librarian, whose ceaseless assistance simplified my problem of data collection.

Any mistakes of this study should be attributed to the author alone.

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SYMBOLS IN THE TABLES

-- means "nil" or "negligible"

. . means "not available" or "not calculated"

In the tables, figures may not add up to 100 per cent because of rounding.

LIST OF ABBREVIATIONS

EEC = European Economic Community.

SITC = Standard International Trade Classification.

UNCTAD = United Nations Conference on Trade and
Development.

N.B. £ 1 (Nigerian Pound) = \$2.80 (American, since 1949).

£ 1 = 1.17 sterling since sterling
devaluation of November 1967
(i.e., Nigeria did not devalue
along with the United Kingdom).

INTRODUCTION

The main objectives of this study are threefold:

(1) to investigate the structure and direction of Nigeria's merchandise trade; (2) to explain the main determinants of Nigeria's import and export trade; and (3) to consider the future prospects of Nigeria's external trade. (External trade, international trade and foreign trade shall be used interchangeably.)

After outlining the salient features of the Nigerian economy in chapter I, the first section of chapter II reviews the structure of exports which has changed tremendously from its early dominance by palm produce. Both palm kernels and palm oil are called palm produce as they are joint products. The second section of chapter II analyses the composition of imports in accordance with the SITC and end use categories pointing out the substantial restructuring of Nigeria's imports due to import substitution and the expanding need for capital goods.

Chapter III looks at the distribution of exports and the sources of imports bringing out the factors that affected the direction of trade which has become fairly diversified by the sixties in contrast to the predominance of the United Kingdom in the earlier part of the century. This chapter is concluded by a summary of some important

commercial policies that have been executed or proposed to affect the direction of trade.

In chapters II and III, the post World War II period is of more interest not only because the data are much more comprehensive but also because the period provides the background for viewing the export commodity prospects for the years ahead.

In chapter IV, we examine the main determinants of Nigeria's imports (aggregate and disaggregated) and exports to the United Kingdom, the United States and each of the EEC countries except Belgium and Luxemburg--for a sixteen year period, 1950-65. Income and price elasticities are estimated.

The fifth chapter reappraises the export prospects of Nigeria's main commodities and outlines some suggestions for the future.

CHAPTER I

THE NIGERIAN ECONOMY

This introductory analysis is to focus attention on the salient features of the economy of Nigeria. These are the features relevant to the discussion of the country's external trade.

Nigeria, with a population of 55.7 million,¹ is the most populous country in Africa.² The country covers an area of 356,669 square miles.³

Agriculture is the mainstay of the Nigerian economy. This is its first and most obvious characteristic. In 1960 (independence year), primary production--agriculture (agriculture alone accounted for about half of the Gross Domestic Product),⁴ livestock, forestry and fishing--accounted for about 65 per cent of the GDP and provided employment for about 80 per cent of the country's working population. Today, Nigeria is still essentially agricultural with agriculture accounting for

¹Daily Times, Nigeria Year Book 1968 (Lagos: Times Press Limited, 1968), p. 11.

²C. C. Onyemelukwe, Problems of Industrial Planning and Management in Nigeria (London: Longmans Green and Co. Ltd., 1966), p. 5.

³Daily Times, Nigeria Year Book 1969, op. cit., p. 21.

⁴P. Robson and D. A. Lury, eds., The Economies of Africa (London: George Allen and Unwin Ltd., 1969), p. 160.

almost 60 per cent of the GDP and providing employment for about 75 percent of the country's working population. Farmers raise both subsistence and cash crops through the small scale non-mechanized fashion. About 80 percent of all agricultural output is for local consumption. Although only about 20 percent of agricultural production is exported, it constitutes about 70 per cent of total export value.

The second feature of Nigeria's economy is the small percentage of the country's economic activity geared towards foreign trade. In 1958, the proportion of Nigeria's foreign trade to her GDP was 16.8 per cent (Table 1, column 3). Relative to other less developed countries, the degree of openness of the Nigerian economy is low. Kindleberger has calculated foreign trade as proportion of national income, 1958, for many less developed countries. The range is wide between Iraq's 47 per cent and India's 7.5 per cent.¹

As brought out in Table 1, exports have never been more than about one-fifth of the GDP. With some fluctuations, the share of imports in the GDP has been rising since 1950 despite the remarkable expansion of import substitution. The main cause is the rapidly expanding level of the imports of capital goods. Between 1955 and 1965, the ratio of imports to the GDP was higher than that of exports. This is one of the elements of what is termed the "widening trade gap," which has been summarized by Meier:

¹Kindleberger, Foreign Trade, op. cit., p. 10.

TABLE 1

NIGERIA'S MERCHANDISE TRADE AS PERCENTAGE OF GDP
1950^a-66 (AT 1957 CONSTANT PRICES)

	Exports ^b (f.o.b.) as % of GDP (1)	Imports (c.i.f.) as % of GDP (2)	Foreign Trade as % of GDP (3)
1950	13.1	8.9	11.0
1951	16.2	11.4	13.8
1952	16.3	14.2	15.3
1953	15.2	13.3	14.3
1954	17.2	13.1	15.2
1955	14.8	15.2	15.0
1956	15.4	17.5	16.5
1957	14.0	16.8	15.4
1958	15.1	18.5	16.8
1959	17.4	19.0	18.2
1960	17.2	22.0	19.6
1961	16.7	21.2	19.0
1962	15.7	18.9	17.3
1963	16.3	17.9	17.1
1964	18.9	22.4	20.7
1965	20.4	21.0	20.7
1966	20.3	18.3	19.3

^aNigeria's first National Accounts study was for 1950.

^bIncludes re-exports.

Sources: Columns 1 and 2: Calculated from the value of Nigeria's GDP, exports and imports. For export and import value see United Nations, Yearbook of International Trade Statistics, 1967; for GDP see Adebayo Adedeji, Nigerian Federal Finance (London: Hutchison Educational Ltd., 1969), p. 37. Column 3: Average of exports and imports. See C. P. Kindleberger, Foreign Trade and The National Economy (New Haven: Yale University Press, 1962), p. 34.

Thus, there remains the basic problem that, in the course of development, the rate of growth of imports tends to be more rapid than the rate of growth of national output, and the demand for imports tends to

exceed the export-based capacity to import.¹

The third essential feature of the Nigerian economy is the tremendous role played by external trade. In terms of its contribution to Nigeria's economic development, international trade plays a much more important role than is implied by the share of trade in the GDP (Table 1, column 3). Export crops are the chief sources of foreign exchange--a characteristic that is common to many less developed countries. Exports are also one of the main sources of government revenue through export and produce sales taxes. In the early fifties, when the demand for Nigeria's export crops was strong and their prices correspondingly high, export taxes represented about 33 per cent of total tax revenue. Although the proportionate share of export taxes has been decreasing since then, they remain an important source of government revenue. Presently, import duties are even much more important than export taxes. For instance, in 1966, the value of export duty was £14.3 million while that of import duty was up to £58.7 million.² Industrialization and diversification of Nigeria's agricultural economy depend mainly on foreign trade. Imports provide the vital and strategic capital goods necessary for economic development. Also, it is the foreign exchange earned by the export crops which largely

¹Gerald M. Meier, The International Economics of Development (New York: Harper & Row, 1968), pp. 76-77.

²United Nations, Yearbook of International Trade Statistics, 1967.

determines the quantity of capital goods that may be imported for industrialization.

"Dualism" as a thesis in development literature is not applicable to the Nigerian economy. This is the fourth of its main features. Some characteristics of dualism as stated by Meier are:

. . . the "technological dualism" associated with the differences in factor endowment and techniques of production in the advanced "industrial" sector and the backward "pre-industrial" sector. The advanced sector is composed of plantation or other large-scale commercial agriculture, mines, oilfields or refineries which produce for export, and large-scale manufacturing, while the backward rural sector is dominated by peasant agriculture, handicrafts, and small-scale industry producing for a local demand.¹

Nigerian agriculture produces both for domestic consumption and for export. Usually, both domestic foodstuffs and export crops are cultivated side by side in the same area and on the same farm unit. Helleiner explains this lack of dualism:

Far from being produced within a foreign-owned, foreign-managed, and self-contained enclave, most of Nigeria's exports came from within the "traditional" world of the peasant. The "export sector" in Nigeria, as has been seen, can scarcely be separated, even conceptually, from the subsistence and internal exchange economy. It can in no sense be termed a mere "outpost" of the mother country's economy.²

This feature may be undermined to some extent by the upsurge of crude petroleum production which is foreign controlled, i.e., a minor form of "enclave economy" may develop.

¹Meier, International Economics, op. cit., pp. 229-230.

²Helleiner, Peasant Agriculture, op. cit., p. 48.

The fifth feature of the Nigerian economy is the insignificant role played by the manufacturing industry. It contributes less than 5 per cent¹ to the GDP and just about one per cent towards total exports (Table 2). Almost half Nigerian manufactures are raw-material oriented. After accounting for the processing of tin ore and coal and the refining of petroleum, the remaining portion of this category consists of abattoires, oil seed mills, saw mills, soap plants, etc. all dependent on tree and field crops, and animal and forest products. However, industrialization is growing fairly rapidly. Within a decade, 1950-60, production in the manufacturing industry rose by 398 per cent.² Some notable progress has been achieved in import substitution of cement, asbestos, plastics, tobacco, textiles, soft drinks and beer, phonograph records and margarine.

Lastly, another conspicuous feature of the Nigerian economy is the reasonably diversified structure of its export crops relative to those of other less developed countries. Kindleberger has cited 27 less developed countries with more than 50 per cent of their export value in a single commodity in 1958.³ In that year, 8 commodities --crude petroleum, cocoa, palm kernels, palm oil, groundnuts, rubber, raw cotton and tin ore--accounted for 85.3 per cent

¹Adedeji, Nigerian Finance, op. cit., p. 38.

²Onyemelukwe, Problems of Industrial Planning, op. cit., p. 37.

³Kindleberger, Foreign Trade, op. cit., p. 31.

of total export value (Appendix II). None of these commodities was more than one-quarter of total export value. (But since 1965, one product--crude petroleum--has been earning more than one-quarter of Nigeria's total export value. In fact its share of total export earnings rose to 33 per cent in 1966--Appendix II.) In 1967, the share of the 8 commodities remained almost the same (82.9 per cent of the total).

Summary

In summary, the main features of the Nigerian economy can be dichotomized into two categories. In the first place are the features that are more or less common to all the less developed countries--agrarian economy; the very important role played by foreign trade; and the meagre contribution of the manufacturing industry. Secondly, the other three main features of the Nigerian economy--the relatively low degree of openness; the lack of an "enclave economy"; and the reasonably diversified nature of export crops--are shared by only few other less developed countries.

CHAPTER II

STRUCTURE OF EXPORTS AND IMPORTS

A. Introductory

Chapter II is divided into two main sections. The first section deals with the structure of Nigeria's exports since 1900 with main emphasis on post World War II performance. The second section outlines the structure of imports according to (a) the SITC and (b) end use categories--the discussion of import structure is exclusively on the post-war period: 1950-67. The important factors that contributed to the structural changes in both exports and imports will be mentioned.

B. Exports (Commodity Composition)

Table 2 summarizes the percentage distribution of Nigeria's chief export crops according to their economic sectors. Other minor foreign exchange earners which are not discussed in this study are: beniseed, jute and jute-substitute, fibres, coconuts (in form of copra, oil and cake), tobacco, cashew nuts, kolanuts, soya bean, citrus, coffee and tea.

I. Agricultural sector

(1) 1900-39

The most striking feature evident from Table 2 is

TABLE 2

COMPOSITION OF NIGERIA'S EXPORTS AS PERCENTAGES^a OF TOTAL EXPORTS (SELECTED YEARS), AND PERCENTAGE CHANGE IN VALUE 1956-58 TO 1965-67

Sector/Exports	1900	1929	1939	1956-58 Average	1965-67 Average	% Change in Value 1956-58 to 1965-67
	(1)	(2)	(3)	(4)	(5)	(6)
Agricultural (including forest) products	94.8	83.5	69.8	88.1	56.9	+ 32.4
Cocoa	--	13.1	17.4	19.7	16.5	+ 63.7
Palm kernels	44.9	24.3	18.4	15.1	7.2	- 3.5
Palm oil	36.7	21.4	9.1	10.6	3.3	- 36.1
Groundnuts ^b (including oil and cake)	--	14.0	10.3	19.5	19.9	+ 83.3
Rubber	10.1	0.9	1.3	5.4	3.6	+ 36.9
Raw cotton	--	3.1	1.9	5.5	2.3	- 28.9
Timber (log and sawn)	3.1	1.4	1.2	3.5	2.4	+ 43.1
Hides and skin	--	5.3	7.1	2.4	1.9	+ 61.0
Bananas	--	--	3.1	2.2	--	--
Minerals and mineral products	--	13.1	23.2	6.3	35.0	+1006.0
Crude petroleum	--	--	--	0.7 ^d	29.4	+7640.0
Tin ore and metal	--	13.1	23.2	4.9	5.6	+ 128.0
Columbite	--	--	--	0.7

TABLE 2--Continued

Sector/Exports	1900	1929	1939	1956-58 Average	1965-67 Average	% Change in Value 1956-58 to 1965-67
	(1)	(2)	(3)	(4)	(5)	(6)
Manufactures and semi-manufactures	--	--	--	0.8	1.0	- 0.4
Others	5.2	3.4	7.0	4.8	7.1	- 34.4
Total	100.0	100.0	100.0	100.0	100.0	+ 106.1

^aSee Appendix I for the value. Also see Appendix II for annual percentage for 1956-58 and 1965-67.

^bGroundnuts are known as peanuts in many countries.

^cWithout the Cameroons (which left the Nigerian Federation in 1960), banana exports were not large enough to record.

^dFor 1958 only.

Sources: Columns 1-5: Gerald K. Helleiner, Peasant Agriculture, Government, and Economic Growth in Nigeria (Homewood, Ill.: Richard D. Irwin, Inc., 1966), Table IV-A-16. Column 6: Nigeria Year Book, 1969, p. 139.

the dominant role that the agricultural sector played in Nigeria's export trade during the first six decades of this century. With the exception of 1939, this sector always accounted for over four-fifths of total export value.

At the turn of the century, palm produce was by far the predominant export product of Nigeria--accounting for almost 82 per cent of total export earnings. As the century progressed, new export crops were introduced thus leading to a restructuring and diversification of export commodities. In 1929, the "big four" of the agricultural sector--cocoa, palm kernels, palm oil and groundnuts--jointly accounted for 72.8 per cent of overall export value.

In 1939, the total value of Nigeria's exports was only 57.9 per cent of what it had been in 1929--a decline from £17.8 million in 1929 to £10.5 million in 1939 (Appendix I). This was caused by an interruption in the growth of exports between 1929 and 1945. The main causes were the Great Depression of the 1930's, which affected the economy of Nigeria as adversely as it did to the economies of most other countries and the war years, between 1939 and 1945, when normal economic activities were disrupted. The depression and the war caused severe decline in Nigeria's export prices and temporary stagnation in export volume. Every agricultural export product registered a decline in value between 1929 and 1939 (Appendix I). Furthermore, with the exception of 1937, pre-depression levels of the value of exports were not regained and growth of the Nigerian

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economy was retarded until 1946.¹

A few new crops, though of minor significance, contributed towards a greater diversification of agricultural export crops by 1939. Bananas (3.1 per cent) were the most important of the new crops.

(2) 1956-58

In 1956-58, the agricultural sector continued to dominate the export trade (88.1 per cent of total exports) thus regaining the setback it experienced in 1939. The return to dominance was caused by the tremendous rise in the volume and prices of Nigeria's agricultural exports in the immediate post war years and the Korean War period. Consequently, the value of the principal agricultural exports soared after 1945 with each reaching a peak in 1954.² Even though the export value of agricultural products remained below the 1954 peak from 1955 to 1958--mainly due to stagnant or declining export prices--it remained very high, enough to reassert the clear dominance of the agricultural sector. Also, the development-oriented government policies of post World War II (in 1946, a Ten-Year Plan of Development and Welfare in Nigeria was launched)³ were heavily concentrated on agriculture.

No single commodity under the farm sector represented

¹Helleiner, Peasant Agriculture, op. cit., pp. 492-493.

²Ibid., Table IV-A-7.

³Adedeji, Nigerian Finance, op. cit., p. 36.

more than 20 per cent of total export value. By 1956-58, cocoa has become the most valuable of all Nigeria's exports with 19.7 per cent of the total. The main reason was that the rate of growth in the volume of cocoa exports increased in the late fifties as trees, the planting of which had been stimulated by the immediate post war boom, continued to come into their bearing age. The relative share of palm kernels continued to decrease due to an increase in domestic consumption and the expansion of substitutes--other types of fats and oil.

(3) 1965-67

Two general observations of the agricultural sector in 1965-67 follow (see Appendices I and II). First, an increase in the absolute value notwithstanding, the relative contribution of the agricultural sector to total export income dropped to its lowest on record--from 88.1 per cent in 1956-58 to 56.9 per cent in 1965-67. The reasons for the relative decline were the sluggish growth in export earnings of the traditional primary products and the spectacular increase in exports of crude petroleum.

Secondly, bananas had dropped out of the list of export crops due to the separation of the Cameroons (the main supplier) from the Federation of Nigeria.

I will now discuss the performance of each of the chief farm export crops during the period 1965-67.

Cocoa.--In 1966, cocoa has a relative and absolute

decline--from £42.7 million or 16.2 per cent in 1965 to £28.3 million or 10.2 per cent in 1966 (Appendices I and II). The drop in export receipt from cocoa was due to a drastic fall in volume (from 175 in 1965 to 110 in 1966; 1963=100)¹ with the result that cocoa had its lowest export receipts since 1958. But in 1967, despite a decline in its price, cocoa made a fantastic comeback due to a rise in volume (142 in 1966 as opposed to 110 in 1966).² In that year cocoa, with 23 per cent of total export value (its highest ever) replaced groundnuts as the second (next to petroleum) most important product in overall foreign exchange earnings.

Groundnuts.--In value and relative terms, groundnuts ranked first among Nigeria's agricultural export crops, comfortably ahead of cocoa, in 1965-67 (Appendix I). The decline in the value of groundnuts (Appendix I, columns 9 and 10) from 1966 to 1967 was due to evacuation difficulties resulting from the disruption of railroad traffic when the Nigerian civil war started.

Raw cotton.--Since 1956-58, the export value of cotton has been on a relative and absolute decline (-28.9 per cent between 1956-58 and 1965-67--see Table 2, column 6). This is explained mainly by the substantial diversion of raw cotton to domestic industries and secondarily by

¹International Monetary Fund, International Financial Statistics, April, 1970, p. 238.

²Ibid., p. 238.

declining prices.

Palm produce.--Between 1956-58 and 1965-67, both palm kernels and palm oil declined drastically (-3.5 and -36.1 per cent respectively; Table 2, column 6) in relative share when compared with their contribution in 1956-58. The trend was caused by the national emergency which led to the economic blockade of the areas where palm produce is chiefly produced. Not only was the production of palm kernels and palm oil reduced, but also, transportation problems made it almost impossible to convey these products to the coast.

II. Minerals and mineral products

(1) 1900-39

With no appearance in 1900, tin ore rose to the fourth position (along with cocoa, each sharing 13.1 per cent) of all export commodities by 1929. By 1939, tin ore (still the only product under this sector) had risen to the premier position among export products accounting for almost a quarter of total export value. The main reason for this change was the relative and absolute decline of the agricultural sector, as the export of tin ore was about the same value in 1929 and 1939 (£2.3 million and £2.4 million respectively).

(2) 1958-58

While the minerals and mineral products sector

accounted for almost one-quarter of total export value in 1939, its share was a low of 6.3 per cent in 1956-58. The relative decline was due to the drop in the export earnings of tin metal (a result of the imposition of export quotas in 1957 by the International Tin Council)¹ which declined from the leading position among all export products in 1939 to the seventh place in 1956-58.

Anyway, this sector became much more diversified with the appearance of columbite and crude petroleum. As a matter of fact, a very important development in the Nigerian economy was from this sector--the first export of crude petroleum in 1958. Accounting for less than one per cent of total export value in that year, crude petroleum was soon to alter the export pattern of Nigeria.

The relative share of columbite in total export value which was 1.3 per cent in 1956 declined to 0.6 per cent and 0.3 per cent in 1957 and 1958 respectively. This was caused by the stoppage of stockpiling of columbite by the United States in the mid-fifties which led to a reduction in Nigeria's columbite shipments.²

(3) 1967-67

Between 1965 and 1967, crude petroleum alone accounted for £77.4 million out of the total rise of £83.5

¹V. P. Diejomoah, Economic Development in Nigeria (Princeton, N.J.: Princeton University, 1965), p. 21.

²Ibid., p. 21.

million (over the 1956-58 value of £8.3 million) in the minerals and mineral products sector (Appendix I). In 1965, for the first time, crude petroleum moved to the lead as Nigeria's most valuable export commodity. The following year saw a further rise in the relative share of petroleum amounting to £92 million or 33 per cent of total overall export earnings. By 1967, even though still the chief foreign exchange earner, petroleum's relative and absolute share declined due to the disruption of production during the civil war.

III. Manufactures and semi-manufactures

The role of this sector--mostly plywood and veneer sheets, beer, rubber, leather and tobacco products--was insignificant in the overall structure of Nigeria's exports. Even though the production of manufactures is expanding very rapidly, it is essentially for domestic consumption.

Summary

Some principal conclusions may be drawn from this section. First, the agricultural sector dominates the export trade. This is entirely natural at the present stage of Nigeria's economic development and is likely to continue into the future. Secondly, from the majestic dominance by palm produce in 1900, the export trade had been fairly well diversified by the terminal date of this study. The most important single development, in the last decade, that has altered the structure of exports, is the

1. The first part of the paper is devoted to the study of the

properties of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

for $x \in \mathbb{R}$. It is shown that $f(x)$ is an odd function and

that $f(x) \in C^1(\mathbb{R})$. The derivative of $f(x)$ is given by

$$f'(x) = \frac{1}{1+x^2}$$

and it is proved that $f(x)$ is bounded on \mathbb{R} . In fact,

$$-\frac{\pi}{2} < f(x) < \frac{\pi}{2}$$

for all $x \in \mathbb{R}$. The second part of the paper is devoted to the

study of the function $g(x)$ defined by the equation

$$g(x) = \int_0^x \frac{t}{1+t^2} dt$$

for $x \in \mathbb{R}$. It is shown that $g(x)$ is an even function and

that $g(x) \in C^1(\mathbb{R})$. The derivative of $g(x)$ is given by

$$g'(x) = \frac{x}{1+x^2}$$

and it is proved that $g(x)$ is bounded on \mathbb{R} . In fact,

$$-\frac{\pi}{4} < g(x) < \frac{\pi}{4}$$

for all $x \in \mathbb{R}$. The third part of the paper is devoted to the

study of the function $h(x)$ defined by the equation

$$h(x) = \int_0^x \frac{t^2}{1+t^2} dt$$

for $x \in \mathbb{R}$. It is shown that $h(x)$ is an even function and

that $h(x) \in C^1(\mathbb{R})$. The derivative of $h(x)$ is given by

$$h'(x) = \frac{x^2}{1+x^2}$$

and it is proved that $h(x)$ is bounded on \mathbb{R} . In fact,

spectacular rise of petroleum to the position of chief foreign exchange earner. Lastly, the exports of manufactures, even though rising, is still very insignificant.

C. Imports

(1) Standard International Trade Classification

In table 3, we show the pattern of Nigeria's imports by the SITC sections in percentages.

Manufactures.-- Throughout the period 1950-67, the dominance of manufactured goods was on the decline. The most important item under manufactures was textiles. The relative decline of manufactures was partly a result of the relative decrease in imported textiles as home production of cotton goods expanded. In 1960, textiles represented about half of total value of manufactured goods' imports while in 1967 the share had declined to about 40 per cent (Appendix IV). Furthermore, the imports of rayon materials, which increased rapidly until the mid-1950's had been declining steadily since, and by 1965, they were only one-third of their level of the mid-fifties since rayon goods have proved to have disadvantages under Nigeria's weather conditions.¹ Lastly, cement is another commodity that has been subjected to increasing import substitution. The decline in the value of cement importation in 1960-67 is

¹Food and Agriculture Organization, Agricultural Development in Nigeria, 1965-1980 (Rome, 1966), p. 167.

TABLE 3

COMPOSITION OF NIGERIA'S IMPORTS BY SITC CATEGORIES
IN PERCENTAGES (SELECTED YEARS)

SITC Section	Commodity Groups	1950 (1)	1954 (2)	1959 (3)	1964 (4)	1965 (5)	1966 (6)	1967 (7)
0	Food and live animals	5.5	10.5	11.7	8.0	8.4	10.1	9.5
1	Beverages and tobacco	5.0	3.9	3.2	1.0	0.7	0.9	0.8
2	Crude materials mainly inedible, except fuel	2.0	1.3	1.2	1.0	2.4	2.8	2.6
3	Mineral fuels, lubricants and related materials	6.6	4.9	5.8	8.0	6.3	1.5	3.9
4	Animal and vegetable oils and fats	--	--	--	--	0.1	0.1	0.1
5	Chemicals	4.0	4.2	5.7	7.0	7.3	8.1	9.4
6	Manufactured goods	52.9	47.5	37.0	35.0	32.7	30.9	32.3
7	Machinery and transport equipment	18.0	17.6	24.0	29.0	33.6	37.2	32.0
8	Miscellaneous manufactured articles	6.0	8.2	10.0	9.0	7.4	7.3	7.8
9	Miscellaneous commodities	--	1.7	1.5	1.0	1.1	1.1	1.4
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Column 1: Robson and Lury, eds., Economies of Africa, op. cit., p. 181.
Columns 2-4: Helleiner, Peasant Agriculture, op. cit., Table IV-A-18.
Columns 5-7: United Nations, Yearbook of International Trade Statistics, 1967.

evidence of this change.

Machinery and transport equipment.--Another obvious development was the upward trend of machinery and transport equipment. (For the causes of the rapid expansion of capital goods' imports, see the discussion of imports by end use categories.) From a share of 18 per cent of total imports in 1950, it rose to 32 per cent in 1967--£10.9 million in 1950 in contrast to £71.6 million in 1967 (Appendix III), i.e., an expansion of some 600 per cent in less than two decades. Electric machinery and road motor vehicles were the most important commodity groups under this section (Appendix IV).

Mineral fuels.--Mineral fuels increased, both absolutely and relatively, until in 1964, when they reached their peak with a relative share of 8 per cent (value at £19.5 million) of total imports. By 1966, the percentage share had declined to 1.5 per cent (£3.8 million). This very drastic relative and absolute decline was due to the establishment of an oil refinery in Nigeria in 1965 which started to provide various petroleum products--kerosene, gasoline, diesel oils and fuel oils--that were being imported hitherto. The effect of the civil war, which forced a temporary closure of the refinery, led to a relative and absolute rise in imports of mineral fuels in 1967 (Table 3 and Appendix III). The refinery is now in operation and in the near future, the imports of mineral fuels would be

negligible.

Food.--Even though the percentage share of food rose by about twofold in 1950-67, its value rose by about seven times (Appendix III). Robson and Lury have given some explanation for this phenomenon of high rise in food import value:¹ (a) the increasing number of expatriates in Nigeria; (b) the growth of Nigerian middle class who adopt the expensive tastes of the managerial, administrative and professional elite; (c) the modest increase in per capita income; and (d) the government's open-door trade policy with respect to food. Population increase was another factor.

Stockfish, flour (wheat) and sugar are important items in food importation (Appendix IV).

Chemicals.--Of all the nine SITC sections, chemicals accounted for the highest relative increase within the period--from 4 per cent (£2.3 million) of total imports in 1950 to 9.4 per cent (£21.3 million) in 1967. In value terms, the rise was about tenfold. This was partly a result of increasing use of fertilizers and insecticides.

Beverages and tobacco.--Beverages and tobacco had the greatest relative and absolute decline in comparison with all other sections (Table 3, Appendix III). The fall in value indicates the expansion of domestic production of

¹Robson and Lury, eds., Economies of Africa, op. cit., p. 182.



beer and tobacco.

(2) End Use Categories

Table 4 delineates the classification of imports into end use according to the Nigerian Trade Report. In 1960-65, there developed some remarkable changes in the content of imports under this end use categorization. The following outline seems justified by the figures of Table 4.

Consumer goods: non-durable and durable.--The share of non-durable consumer goods--the most important being food, tobacco, beverages, rubber goods and textiles--fell from 48 per cent in 1960 to 37 per cent in 1965, an eleven point decline within six years. The decline has been gradual but continuous since the early fifties when over 50 per cent of total imports consisted of non-durable consumer goods.¹

Combining both non-durable and durable consumer goods, their share fell from 61 per cent in 1960 to 45 per cent in 1965. What were the causes of the decline in spite of rising per capita income? Two answers stand out clearly: the successive increases in import duties on consumer goods; and the expansion of import substitution which is the cornerstone of Nigeria's Development Plans.

Without the restrictive measures taken to curb

¹Olapade Aboyade, Foundations of African Economy (New York: Praeger, 1965), p. 8.

TABLE 4

NIGERIAN IMPORTS: ANALYSIS BY END USE^a
IN PERCENTAGES (1960-65)

Imports	1960 (1)	1961 (2)	1962 (3)	1963 (4)	1964 (5)	1965 (6)
Consumer non-durable	48	49	46	46	40	37
Consumer durable	13	12	12	9	8	8
Total consumer	61	61	58	55	48	45
Capital goods	22	21	22	23	28	31
Raw materials	17	18	20	22	24	24
Capital goods and raw materials	39	39	42	45	52	55
Total imports	100	100	100	100	100	100
Total import index 1960=100	100	103	94	100	118	127

^aClassification is according to Nigerian Trade Report.

Source: Nigeria Year Book, 1967, p. 83.

imports of consumer goods, the demonstration effect, which is very strong in Nigeria, could have increased the relative share of imported consumer goods--the growth of domestically produced goods notwithstanding. Yates, in his discussion of consumption pattern of different countries has commented on the demonstration effect thus:

Nowadays all under-developed countries have a high income elasticity of demand for imports. They see the consumption standards of the advanced countries and desire to imitate them. Their well-to-do classes are able to pay for, and press to be permitted to import,

a wide range of consumer goods not available at home.¹

Capital goods.--As a result of different factors, the relative share of capital goods rose from 22 per cent to 31 per cent between 1960 and 1965. Adedeji, among others, has pointed out the main factors:² (a) the increased rate of domestic capital formation partly resulting from the 1962-68 Development Plan; (b) the tariff concessions for strategic capital goods; (c) the expansion of projects financed by foreign capital, especially in crude petroleum industry; and (d) the increased drawing on foreign aid tied to capital goods manufactured in the donor country.

In my opinion, Nigeria, with her present vigorous approach to economic development, should increase to over 40 per cent the share of capital goods (excluding raw materials) in total import value--because there is no bright prospect of increasing Nigeria's domestic production of capital goods to any appreciable level in the near future. A country like India, despite her domestic production of some capital goods, had 40 per cent of total import value in form of capital goods in 1955-56. In spite of that, S. J. Patel has suggested that the share of capital goods in India's total imports be raised to between 50 and 60 per

¹L. P. Yates, Forty Years of Foreign Trade (London: George Allen and Unwin Ltd., 1959), p. 198.

²See Adedeji, Nigerian Finance, op. cit., pp. 176-177; also see Trade Directory of the Federal Republic of Nigeria 1965-66 (Lagos: Federal Ministry of Trade and Industry, 1966), p. 60.

cent by 1975-76¹ in order that the country can meet her requirement of capital formation.

Summary

Concluding, then, the most rapidly expanding (in relative and absolute terms) import group was that of machinery and transport equipment (SITC 7) which continued to develop strongly in consonance with the country's economic development. On the other hand, the dominance of consumer goods in total import value was on a decline. Textiles (especially cotton goods), cement, beverages and tobacco, among others, declined in relative terms due to restrictive measures and import replacement.

D. General conclusions: exports and imports

Broadly speaking, Nigeria's trade pattern is characterized by dependence on exports of primary products and dependence of imports on manufactures. The first three decades of this century saw a greater diversification of exports while the expansion of petroleum exports has dominated individual commodity changes during the last decade. A very clear fact that emerges from a comparison of the goods exported and imported is that while there are only a few major export crops that stand out above the others, imports, apart from the obvious predominance of

¹S. J. Patel, "Export Prospects and Economic Growth: India," Economic Journal (September, 1960), 490-506.

cotton piece goods, are spread over a greater variety of goods. The mounting requirement of capital formation has accelerated the growth of capital goods importation whilst import substitution has led to the relative decline of some consumer goods.

CHAPTER III

DIRECTION OF TRADE

A. Introductory

In this chapter the destination of exports and the sources of imports of Nigeria will be discussed with greater concentration on the post World War II period. The factors and the government policies that have shaped or altered the direction of trade will be pointed out.

B. Distribution of Exports by Destination

The most outstanding feature during the early years of the century was the very narrow geographical concentration of Nigeria's export market (see Table 5). In 1900, the United Kingdom (49.4 per cent), and Germany (44.3 per cent) were the principal countries of destination.

The importance of Germany to Nigeria, as a customer, was based on the large proportion of palm kernels bought by her. Germany was importing Nigerian palm kernels, not only on account of their oil content, but also because her livestock industry heavily depended on oil-cake as feeding stuff.¹

In both 1929 and 1939, the German share, even though

¹M. Perham, ed., Mining, Commerce and Finance in Nigeria (London: Faber and Faber Ltd., 1947), p. 140.

TABLE 5

PERCENTAGE DISTRIBUTION OF NIGERIA'S EXPORTS
BY DESTINATION (SELECTED YEARS), AND
PERCENTAGE CHANGE IN VALUE 1963-67

Country or Area	1900 (1)	1929 (2)	1939 (3)	1953 (4)	1963 (5)	1967 (6)	% change in value 63/67 (7)
United Kingdom	49.4	44.1	61.0	80.2	40.1	29.5	- 5.0
Total EEC	--	--	--	5.8	37.5	40.3	+ 38.5
France	3.9	8.2	6.7	0.3	8.7	9.4	+ 41.0
Germany ^a	44.3	19.3	11.7	2.1	9.5	10.7	+ 48.1
Italy	--	--	--	0.6	5.2	5.9	+ 47.6
Belgium & Luxembourg	--	--	--	--	2.7	1.3	- 32.2
Netherlands	--	8.1	6.4	2.8	11.4	13.0	+ 51.8
United States	--	14.4	10.7	11.8	9.4	7.8	+ 6.5
Japan	--	--	--	--	1.3	2.6	+158.0
Other countries	2.4	5.1	3.4	2.2	11.6	19.9	+115.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	+ 28.8

^aRefers to West Germany since 1954.

Sources: Columns 1-3: Helleiner, Peasant Agriculture, op. cit., Table IV-A-14.
Columns 4-6: United Nations, Yearbook of International Trade Statistics,
1963 and 1967. Column 7: Calculated from Appendix VII.

still the second in importance, had declined substantially in relative terms. The decline was partly due to an agreement between Germany and Holland whereby a higher import quota was granted to primary produce from the Dutch East Indies in exchange for concessions to German manufactures on the Dutch market.¹ Furthermore, as from 1933, Germany initiated a deliberate policy (as one of her nationalistic policies of the 1930's) in relation to both vegetable and animal fats in order to lessen her dependence on external supply.² The policy lessened Germany's purchase of Nigerian palm kernels.

By 1939, the relative share of the United Kingdom out of Nigeria's total exports had increased substantially, despite a fall in value. (The fall was due to a sharp decline in total export value from £17.8 million in 1929 to 10.5 million in 1939. See Chapter I, Section B for the causes of the decline.) Nigeria's heavy reliance on the United Kingdom's market was partly due to the preferential treatment for Nigeria's products in the United Kingdom. (Both palm oil and groundnuts entered the United Kingdom free of duty while cocoa entered under a preferential rate.) Also, Nigeria's tin ore and metal which accounted for almost a quarter of total imports in 1939 (Table 2) was sent entirely to the United Kingdom.³

¹ Ibid., p. 141.

² Ibid., p. 140.

³ Ibid., p. 165.

In 1953, the export trade link followed the traditional geographical pattern but with some relative changes in share. In that year, four-fifths of the value of Nigeria's total exports were destined for the United Kingdom. This was a great contrast to the situation prior to the Second World War when the share of the United Kingdom was much less and the share going to the European continent was much higher.

Apart from the advantages of preferential treatment, there were other factors accounting for the dominance of the United Kingdom as a purchaser of Nigerian exports.

First, in 1953, there was still a continuation of the wartime bulk purchase arrangements between Nigeria and the United Kingdom Ministry of Food.¹ Secondly, the "Dollar Pool" policy--whereby Sterling Area members conserved their reserves of scarce currencies--of the early years of peace meant that the United Kingdom was purchasing most of her raw material needs from countries within the Sterling Area. Thirdly, the policies of the Nigerian Marketing Boards prevented "free" trade. The bulk of Nigeria's export trade is handled by the State (formerly Regional) Marketing Boards, while the shipment and sale abroad of these crops is controlled by the Nigerian Produce Marketing Board. The Boards had their origin, during the Second World War, in order to protect the United Kingdom's supply of raw materials

¹International Bank for Reconstruction and Development, Economic Development of Nigeria (Baltimore: John Hopkins, 1955), p. 139.

from her West African colonies. Undoubtedly, the Boards affected the direction of the products they were controlling--cocoa, palm oil, palm kernels, cotton and groundnuts. In 1953, these products accounted for some 80 per cent of Nigeria's total export earnings.¹

In 1953, the EEC members' purchases from Nigeria comprised 5.8 per cent of total export value with the Netherlands being responsible for about 50 per cent of total EEC's purchase. The low purchases of the Community can be ascribed to the factors that biased Nigerian exports to the United Kingdom.

The decade, 1953-63, marked some major shifts in the exports of Nigeria. This geographical diversification has become a continuous trend. To bring out this important development, Appendices VII and VIII show the absolute and relative share of Nigeria's traditional and new customers in 1963-67.

The salient characteristics in 1963-67 were (see Table 5 and Appendix VII): first, by 1967, the United Kingdom had lost the first place to the EEC as the chief customer of Nigeria. In that year, the United Kingdom bought 29.5 per cent of total exports--5 per cent decline over 1963 value (Table 5, column 7), while the EEC accounted for 40.3 per cent (38.5 per cent increase over 1963 value). The replacement of the United Kingdom (who buys roughly

¹Helleiner, Peasant Agriculture, op. cit., Table IV-A-7.

about one-third of each of Nigerian principal exports) by the EEC as Nigeria's most important customer may be explained in terms of the loosening of traditional economic ties between the United Kingdom and Nigeria after the latter's independence (1960); the United Kingdom's declining share of world trade; and the quick economic recovery of the EEC members (especially West Germany, France and Italy) from their war-time devastation. All the EEC countries are important buyers of Nigerian groundnuts. West Germany also purchases much of Nigerian cocoa, palm produce, rubber and crude petroleum, while the Netherlands is one of the principal buyers of cocoa and palm produce.

The second feature is that the Western industrialized countries (the U.K., the EEC and the U.S.) continued to dominate Nigeria's export trade (77.6 per cent in 1967).

Thirdly, Nigeria has always found it difficult to expand her export market in Japan. The export trade was so insignificant that it was not recorded until 1963. The main reason is that Japan can obtain most tropical products much more cheaply from nearby Pacific areas.¹

Fourthly, geographical diversification is evident by the relative and absolute rise in the share of "Other countries" (a product of Nigeria's policy of market expansion). In 1967, some of Nigeria's new customers in order of importance were: Canada, with 3 per cent of total exports,

¹Robson and Lury, eds., Economies of Africa, op. cit., p. 189.

had the highest relative rise in value (+369 per cent) between 1963 and 1967, Portugal, Spain, Sweden and the U.S.S.R (see Appendix VIII).

Lastly, Nigeria's trade with other African countries (which consists of petroleum, especially to Ghana, primary products like palm produce and groundnuts and light manufactures) was disappointing--with only 2.7 per cent of total value in 1967. Generally, intra-African trade is very low--some 4 to 6 per cent of total foreign trade of Africa.¹ However, these figures are for registered trade alone. It has been estimated that almost one-fifth of intra-African trade was unregistered.

Traditional and structural factors account for the low intra-African trade. Here are the main factors.² In the first place, there is autarchic planning by each African state which is a product of nationalism that places much emphasis on economic self-sufficiency.

Secondly, there are poor and inadequate transportation network and communication facilities within African countries relative to those linking them with the industrialized countries. Roads and railways were developed by the colonial

¹United Nations, A Survey of Economic Conditions in Africa 1960-1964 (New York: United Nations, 1965), p. 12.

²Largely drawn from the following main sources: "Partners in Development," Report of the Commission of International Development (Pearson Commission), (New York: Praeger, 1969), ch. 3; R. H. Green and Ann Seidman, Unity or Poverty? The Economies of Pan-Africanism (Baltimore: Penguin Books Inc., 1968), p. 73; and Harry G. Johnson, Economic Policies Towards Less Developed Countries (Washington Brookings Institution, 1967), chapters I-III.

powers to suit political administration and to convey export crops and raw materials from areas of production to ports of shipment to Europe. Due to the competitive policies (both economic and political) of the colonial powers, railway lines do not cross monetary zones and only in few cases do they cross national frontiers. In 1963, Emperor Haile Selassie pointed out the problems of transportation system and communications at the inaugural meeting of the Organization of African Unity:

Today, travel between African states and telegraphic and telephonic communications among us are circuitous in the extreme. Road communications between two neighbouring states are often difficult or even impossible. It is little wonder that trade among us has remained at a discouragingly low level . . . these¹ are vital areas in which efforts must be concentrated.

Thirdly, African countries' commercial policies (e.g., Dahomey, a former French colony, lets in French cigarettes duty-free but charges duty of nearly 100 per cent on Nigerian cigarettes, manufactured less than a hundred miles away),² financial institutions, payments arrangements and marketing channels are geared to enhance trade with former colonial powers, with the bias against intra-African trade. Green and Seidman has expressed this thus:

Investment flows, transportation networks, tariff rates, commercial and government purchasing policies, and provision of infrastructure and services were shaped in terms of this pattern and served to reinforce

¹Green and Seidman, Unity or Poverty?, op. cit., p. 66.

²West Africa, January 27, 1968, p. 99.

it.¹

Fourthly, most African countries maintain over-valued exchange rates by means of exchange controls. Harry G. Johnson is one of the exponents of the idea that less developed countries should reduce their domestic prices relative to world prices.² In reply, the less developed countries argue that devaluation would not result in any increase in the exports of primary products because of low elasticity of foreign demand. However, overvaluation of exchange rates creates difficulties for many African countries thus weakening their capacity to compete with the industrialized countries.

Fifthly, intra-African trade in farm products has often been hindered by the sale of commodities by the developed countries on concessional basis. The most conspicuous of such a policy is the surplus disposal of the United States under Public Law 480. Very often, the concessional sale of the United States makes it cheaper for African countries to buy some primary products from the United States instead of from neighbouring African countries. Furthermore, "aid in the form of surplus agricultural products reduces the incentives to increase productivity in agriculture . . . even though it is typically the largest, and an obviously backward, sector in the less developed countries."³

¹Green and Seidman, Unity or Poverty?, op. cit., p. 73.

²Johnson, Economic Policies, op. cit., pp. 74-76.

³Ibid., p. 4.

Lastly, African countries often experience balance of payments crises which compel them to spend their limited foreign exchange on raw materials and capital goods that are produced in the industrialized countries. While this stimulates trade between African countries and the industrialized ones, it hinders intra-African trade.

Summary

The most significant shift in Nigeria's export trade since the end of the Second World War is the relative decline of the United Kingdom in contrast to the relative increase of the EEC with the result that the EEC has since 1967, become Nigeria's chief customer. The industrialized Western countries (the U.K., the U.S., and the EEC) continued to account for the major part of Nigeria's exports. Since 1953 (but particularly since 1963-67), the geographical distribution of exports has been much more diversified. But African countries do not account for any significant proportion of exports from Nigeria.

C. Distribution of Imports by Sources

The sources of Nigeria's imports are not only much more diversified than the destination of exports, but they are much more stable. Also, concentration on a single trading partner (the United Kingdom) was much more marked until about 1963 than was the case with the export trade.

About 81 per cent and 71 per cent of Nigeria's total import value originated from the United Kingdom in

TABLE 6

PERCENTAGE DISTRIBUTION OF NIGERIA'S IMPORTS BY SOURCES
(SELECTED YEARS), AND PERCENTAGE
CHANGE IN VALUE 1963-67

Country or Area	1900 (1)	1929 (2)	1939 (3)	1953 (4)	1963 (5)	1967 (6)	% change in value 63/67 (7)
United Kingdom	80.8	70.5	54.0	53.0	34.2	28.7	- 8.9
Total EEC	--	--	--	17.7	21.6	25.6	+30.4
France	--	2.4	1.1	0.9	3.6	4.2	+26.3
Germany ^a	11.0	10.0	7.6	8.2	7.4	11.3	+64.3
Italy	--	--	1.8	3.7	4.4	4.6	+29.1
Belgium & Luxembourg ^b	--	--	1.2	1.2	1.4	1.3	0.0
Netherlands	4.8	3.6	2.8	3.7	4.9	4.2	- 8.0
United States	0.4	7.6	7.1	4.0	8.5	12.5	+55.6
Japan	--	--	3.1	5.2	12.9	8.3	-30.4
Other countries	3.1	5.9	21.3	20.1	22.6	25.2	+35.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	+12.6

^aRefers to West Germany since 1954.

^bOnly Belgium before 1953.

Sources: Columns 1-3: Helleiner, Peasant Agriculture, op. cit., Table IV-A-15.
Columns 4-6: United Nations, Yearbook of International Trade Statistics,
1963 and 1967. Column 7: Calculated from Appendix VII.

1900 and 1929 respectively. The "mother country" position of the United Kingdom was largely responsible. For instance, in the first three decades of this century, "government imports" which came entirely from the United Kingdom, accounted for between 4 and 10 per cent of total imports.¹

From the 1930's to the 1950's, the principal factor shaping the sources of Nigeria's imports was the United Kingdom's commercial policy. In 1939, only 3.1 per cent of total Nigerian imports came from Japan (Table 6), whereas in 1953, the share of Japan was 5 per cent.² It was the result of the imposition of duties and quotas by the United Kingdom against very cheap Japanese textiles (textiles used to bulk very large in total imports). However, a new development resulted from the restriction of Japanese goods--the replacement of Japanese textiles by other producers whose imports were not subject to quotas. This led to some diversification of the sources of imports as evident by the rise (from 3.1 per cent in 1900 to 21.3 per cent in 1939) in the proportion of total imports from "other Countries," and the appearance of Italy and Belgium whose share had been negligible earlier on. The competition from other suppliers was an important factor in the relative decline of the United Kingdom's share from 71 per cent in 1929 to 54 per cent in 1939.

¹Perham, Mining and Commerce, op. cit., Table XXI.

²Ibid., p. 160.

However, in 1953, the United Kingdom continued to supply over half of total imports partly because of expanding restrictions on imports from non-Commonwealth countries. Japan had the greatest relative increase over pre-war level and provided the third largest group of imports. This was in spite of severe restrictions placed on Japanese imports--which were predominantly textiles (cotton and synthetic fabrics); building materials like corrugated iron sheets, nails, bolts and similar articles; hardware of metal and sewing machines. The import restriction was in part to reduce the competition of cheap Japanese goods with the products of the Sterling area.¹ Due to dollar import restrictions, the United States had dropped from the position of third largest pre-war supplier to the fourth place.

By 1963-67, there had been much more substantial shifts in the distribution of Nigeria's imports by sources. The following features are evident for the period (see Appendices VII and VIII): there was a relative decline in the position of the United Kingdom as the leading supplier. In both relative and absolute terms, Nigeria's import trade with the EEC increased. Germany accounted for most of these increases. The relative increase in the Community's share of total imports was a reflection of aggressive export promotion by the EEC countries and the

¹G. B. Stapleton, The Wealth of Nigeria (Ibadan: Oxford University Press, 1967), p. 180.

effects of development assistance which is tied to imports.

Other important contributory factors to the relative rise of the EEC and many other countries' share at the expense of the United Kingdom were: Nigeria's relaxation of import restrictions from the non-sterling countries following the convertibility of the pound; the supply bottleneck for imported commodities had been eased especially in continental Europe and Japan; and the growing practice of tying aid to purchases in the donor countries meant more goods from the United States and Western Europe whose foreign aid to Nigeria has increased since Nigeria's independence.

The United States expanded her share of imports to Nigeria from 8.5 per cent in 1963 to 12.5 per cent in 1967 due to the increased importation of heavy machinery for economic development. The United States also supplies a relatively high proportion of Nigerian imports of wheat, unmanufactured tobacco and lubricating oil.

The share of Japan in total imports declined both relatively and absolutely in 1963-67 because of the continual imposition of restrictive measures on Japanese goods.

Nigeria's import trade with other African countries was a low of one per cent of total imports--due to the same reasons that were responsible for the low level of intra-African export trade (see section B of this chapter).

The "big three" that absorbed 77.6 per cent of

total export value in 1967 also supplied 66.8 per cent of total imports in that year.

Indicative of the growing relative strength of other suppliers was the 2.1 per cent share of Norway in 1967 while each of the following countries accounted for at least one per cent: Hong Kong, India, Pakistan and Checkoslovakia.

Summary

Summing up then, the distribution of imports by sources was much more diversified than the distribution of exports by destination. The United Kingdom was still, by 1967, the chief but declining supplier of imports with about 3 per cent points above the EEC in that year. Since early fifties, Japan has been a fairly substantial supplier of Nigeria's imports in spite of continual imposition of restrictive measures, while Nigeria was doing a negligible part of her import trade with other African countries.

D. Specific Commercial Policies

In this section I would point out three important commercial policies that have been attempted or executed by Nigeria: her effort to become associated with the EEC; attempt to form a West African Common Market Area; and Nigeria's commercial policy towards Japan.

1. Association with the EEC

Three distinct factors seemed to have generated

Nigeria's desire to become an associated member of the EEC:

(a) her growing trade with the EEC who now supply one-quarter of Nigeria's imports and purchase two-fifths of Nigerian exports; (b) the evident disadvantageous position of Nigeria relative to the 18 African associated members of the EEC whose products enter the EEC duty free; (c) the decision of the United Kingdom to join the EEC in the early sixties. If the United Kingdom had been admitted to the Community, say by 1963, almost 80 per cent of Nigeria's exports would have been sold to the enlarged market.

Consequently, Nigeria decided to seek a free trade arrangement with the EEC and a tentative agreement was reached, in July 1966, after a long and tough negotiation. The major provisions of the agreement were:¹

(a) Nigeria's exports, except the four major ones, would enter the community duty free like those of the 18 African associated members. The exceptions are cocoa beans, groundnuts, palm oil and plywood; for each of these, Nigeria would be allowed to export a quota under the same preferential conditions as the other African associate members, but exports above the quota would be subject to duty.

(b) Nigeria would grant tariff preferences to 26 products from the EEC representing about 4 per cent of her imports from the Community.

(c) Nigeria would be allowed to retain or introduce quantitative restrictions on her imports from the EEC in

¹Trade Directory, op. cit., pp. 62-63.

order to meet her industrialization and development needs or in the event of difficulties in her balance of payments.

The Nigerian civil war led to a deterioration of political relations between Nigeria and some EEC members (especially France) and they never ratified the agreement. In September, 1968, Nigeria decided to abandon her effort to become an associated member of the EEC.

2. West African Common Market

Recognising the very low level of intra-West African trade, Nigeria has been playing a leading role in an attempt to form a West African Free Trade Area. The idea of economic cooperation among less developed countries had been expressed by UNCTAD I which in its Final Act and Report in 1964 recommended that:

Regional economic groupings, integration or other forms of economic cooperation should be promoted among developing countries as a means of expanding their intra-regional and extra-regional trade and encouraging their economic growth and their industrial and agricultural diversification with due regard to the special features of development of the various countries concerned, as well as their economic and social systems.¹

The same opinion has been expressed by the Pearson Commission which, apart from its recommendation for tariff elimination or reduction among the less developed countries, also recommended that the IMF and UNCTAD look into the feasibility of a clearing arrangement among the less

¹Proceedings of UNCTAD, Vol. I: Final Act and Report, United Nations, 1964, p. 11.

developed countries.¹

In 1967, 12 West African countries (Dahomey, Ghana, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra-Leone, Togo and Upper Volta), under the auspices of the Economic Commission for Africa, came to an agreement to form a West African Economic Community in the form of a Free Trade Area. Their ultimate goal is to achieve:

. . . a common agricultural policy, non-discrimination in inter-state trade, coordination in education, training and research, common industrial projects and methods of common financing of them, and coordination of development programmes.²

The free trade arrangement is to include agricultural products and semi manufactures and manufactures. In 1964, Nigeria's export trade with the 11 other countries constituted 2.1 per cent of total export value out of which Ghana alone accounted for some 80 per cent of that value.³

Since 1967, not much has been done to make the agreement materialize. If it materialises, I can see some potential for trade expansion among West African countries as they are competitive in most of their production especially in manufactures. This is according to the exposition of Lipsey: ". . . customs union is more likely to bring gain, the greater is the degree of overlapping [competition] between the class of commodities produced under tariff

¹See Pearson's Commission Report, op. cit., p. 94.

²West Africa, January 27, 1968, p. 99.

³Trade Summary, 1964, op. cit., p. 6.

protection . . ."¹

Apart from the trade stimulating effect of reduced or abolished tariff barriers, improved inter-state communication and transportation network would also enhance trade expansion.

3. Nigeria and Japan

Nigeria's trade relation with Japan has continually engendered concern in Nigeria. For example, in 1963, the value of Nigeria's exports to Japan was only one-ninth of the value of Nigeria's imports from Japan. Consequently, Nigeria has ceaselessly been imposing restrictive measures to alter her direction of trade with Japan. Also, in 1963, Nigeria's visible trade deficit with Japan was £24.5 million (Appendix VII)--about 150 per cent of Nigeria's overall trade deficit of that year. Once again, Nigeria took a very drastic measure--the issuance of licenses for all categories of imports from Japan. Since then, the relative and absolute share of imports from Japan has been on the decline. In late 1969, Japan proposed buying Nigeria's cocoa, cottonseed and lint to offset the trade imbalance between the two countries.²

¹R. G. Lipsey, "The Theory of Customs Unions: A General Survey," Economic Journal, vol. 70 (September, 1960), 496-513.

²West Africa, November 29, 1969, p. 1450.

CHAPTER IV

ECONOMETRIC MODELS OF NIGERIA'S

IMPORTS AND EXPORTS

A. Introductory

The purpose of this chapter is to outline a statistical investigation into (a) the influence of real GDP and relative prices on Nigeria's aggregate import demand; (b) the influence of real GDP and relative prices on Nigeria's disaggregated imports; (c) the influence of real GNP and relative prices on the demand for Nigerian exports by the six most important customers--France, Italy, Netherlands, United Kingdom, United States and West Germany. In 1950, these countries accounted for 94.4 per cent of Nigerian total exports,¹ while in 1965 their percentage share was 76.3 (Table 5). In addition, demand elasticities for each of these three models will be estimated with respect to real income and relative prices.

The study covers a sixteen year period, 1950-65. There are two main reasons for selecting this period. First, there was no devaluation of the Nigerian pound. Secondly, Nigeria's first National Accounts study was for 1950.

¹Calculated from the Yearbook of International Trade Statistics, 1951.

B. Literature Review

I will review, very briefly, the theoretical background of export and import demand in international trade.

Theory tells us that real national income and relative prices are two very important explanatory variables that explain variations in the export and import demand of any country. Besides these two variables, there are a number of other factors that may explain variations in demand for exports and imports, e.g., war, trade barriers, preferential arrangements, changes in taste, changes in exchange rates, and growth of population.

In order to obtain good statistical estimates some conditions have to be satisfied. These are the use of the important explanatory variables; an appropriate set of equations expressing the relation between the dependent and the explanatory variables; and the use of reliable data with non-systematic errors that are reduced to tolerable proportions.¹

In the case of Nigeria, as in many other less developed countries, it is very difficult to meet all these conditions satisfactorily. Apart from the non-availability of some important variables (say data on tariffs), the reliability of the data for some of the relevant and

¹See S. O. Olayide, "Import Demand Model: An Econometric Analysis of Nigeria's Import Trade," The Nigerian Journal of Economic and Social Studies (November, 1968, pp. 303-319.

important variables is poor. Hence, any residuals from the estimate of Nigeria's export and import demand may be expected to contain both errors of omission and errors of measurement.

To estimate import and/or export demand functions, it is usually assumed that each of the independent variables is uncorrelated with the disturbances and that all the disturbances average out to zero.

Then, ceteris paribus, economic theory would expect that Y (real GNP) should have a positive sign and P (relative prices) a negative sign with the same expectation applicable to real income and relative price elasticities respectively.

C. Data and Estimation

Time series data have been used for all estimations. The data were collected from various sources, e.g., United Nations Yearbook of International Trade Statistics and Statistical Yearbook and Nigeria Year Book. All the sources and measurements of all the data used are outlined in Appendices IX-XIV.

D. Econometric Models

Model I: Nigeria's Aggregate
Import Demand

Equation I:

$$M_a = B_0 + B_1 Y + B_2 \frac{P_m}{P_n} + U$$

(+)* (-)

*The expected signs are bracketed beneath each coefficient.

where

- M_a = Index of volume of aggregate imports,
 B_o = Intercept,
 Y = Index of Nigeria's real GDP,
 P_m = Corrected price index of Nigeria's imports (see Appendix X, column 5 for explanation),
 P_n = Nigeria's consumer price index--this I considered to be a good measurement of the movements of domestic prices as they include items entering into final consumption,
 $\frac{P_m}{P_n}$ = Relative prices,
 B_1, B_2 = Real income and relative price coefficients respectively,
 U = Stochastic error term.

Import elasticities

$$\text{Income Elasticity } (E_{my}) = \frac{\partial m}{\partial y} \cdot \frac{\bar{y}}{\bar{m}} = B_1 \frac{\bar{y}}{\bar{m}}$$

$$\text{Price Elasticity } (E_{mp}) = \frac{\partial m}{\partial p} \cdot \frac{\bar{p}}{\bar{m}} = B_2 \frac{\bar{p}}{\bar{m}}$$

where

\bar{m} , \bar{y} , \bar{p} = mean of import, real income and relative price variables respectively.

Model II: Nigeria's Disaggregated Import Demand

Equation II:

$$M_i = b_{oi} + \underset{(+)}{b_{1i}} Y + \underset{(-)}{b_{2i}} \frac{P_m}{P_n} + U$$

*Deflating import prices (P_m) by appropriately constructed

where

M_i = Index of the volume of imports for the i th commodity group ($i = 1, 2, \dots, 5$),

b_i = Intercept, or the coefficients of real income and relative prices.

Model III: Demand for Nigerian Exports

Equation III:

$$X_j = A_{0j} + A_{1j}Y + A_{2j} \frac{P_x}{P_w} + A_{3j}D + U$$

(+) (-) (-)

where

X_j = Volume of Nigeria's exports to country j ($j = 1, 2, \dots, 6$),

Y_j = Index of country j 's real GNP,

P_x = Corrected price index of Nigerian exports (see Appendix XII, column 9 for explanation). The index of Nigerian export price is used in the absence of more appropriate price indices for the different categories of exports. A detailed breakdown of Nigerian exports into SITC categories was not available for the first five years of this study.

P_w = Index of world export price for primary products. I use this type of price index because all the commodities exported by Nigeria have other alternative sources hence the prices of other competing suppliers enter into the determination of the volume of Nigerian exports. For

index of prices of each category would be more appropriate than the use of general price level (P_n), but in the absence of such disaggregated index of prices, the only alternative is what I have done.

example, the volume of Nigeria's cocoa exports is, among other factors, dependent on the supply of cocoa by Ghana and Brazil, the first and third largest world exporters respectively. Furthermore, since Nigeria exports primary products, the correct world price index is the one for primary products, not the one for index of all world exports. (Initially, the general index of world export price was used. In most cases the magnitude of the relative price coefficient for the six countries was very low.)

$\frac{P_x}{P_w}$ = Relative prices,

A_j = Intercept, or the coefficient of real income and relative prices,

D = Dummy variable (applicable only to the United Kingdom)
 = 0 where there was non-convertibility of sterling and
 = 1 where there was convertibility. For an explanation for the use of the dummy variable see Section E of this chapter,

A_3 = Coefficient of the dummy variable with a negative expected sign (i.e., with convertibility the volume of Nigerian exports to the United Kingdom would be lower).

Export elasticities:

$$\text{Income Elasticity (Exy)} = \frac{\partial x}{\partial y} \cdot \frac{\bar{y}}{\bar{x}} = A_1 \frac{\bar{y}}{\bar{x}}$$

$$\text{Price Elasticity (Exp)} = \frac{\partial x}{\partial p} \cdot \frac{\bar{p}}{\bar{x}} = A_2 \frac{\bar{p}}{\bar{x}}$$

Before analysing the empirical results, I would like

Let f be a function from \mathbb{R} to \mathbb{R} defined by

$$f(x) = \begin{cases} x^2 \sin\left(\frac{1}{x}\right) & \text{if } x \neq 0 \\ 0 & \text{if } x = 0 \end{cases}$$

Prove that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that $f'(0) = 0$. (Note that $\sin\left(\frac{1}{x}\right)$ is bounded for all $x \neq 0$.)

Conclude that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

Use the definition of the derivative to prove that

$$\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x - 0} = \lim_{x \rightarrow 0} \frac{x^2 \sin\left(\frac{1}{x}\right) - 0}{x - 0} = \lim_{x \rightarrow 0} x \sin\left(\frac{1}{x}\right) = 0$$

and hence that f is differentiable at $x = 0$ and find $f'(0)$.

to point out some obstacles which may hinder very meaningful statistical investigation into price relations. Even though I have corrected the price indices of Nigerian exports and imports for duty payments, the price indices do not take into account the effect of tariff changes which are paid by Nigerians in the case of imports and are paid by foreigners in the case of exports. Since tariff levels did not remain constant during the period covered by this study nor can one assume that tariffs have moved proportionately to export and import prices, the proper approach would be to correct the price indices for changes in tariffs.

However, no data are available for Nigeria's tariffs. On the export side, I found it very difficult to get an accurate idea of tariff changes by Nigeria's main customers on the principal export commodities of Nigeria. Anyway, since Nigerian exports enter the United Kingdom under the Commonwealth preferential treatment, one may not worry so much about the United Kingdom's tariff changes. In the case of the EEC, Nigeria's chief customer, the only thing that is clear, after looking into some references, is that crude petroleum enters the EEC countries duty free.¹ No reference is made to tariffs on two of Nigeria's main exports --palm produce and groundnuts. In Atlantic Tariffs and Trade

¹See General Agreement on Tariff and Trade, Trade Conference 1964-67 Vol. IV (Geneva: 1967); Political and Economic Planning, Atlantic Tariffs and Trade (London: George Allen and Unwin Ltd., 1962).

there is no mention of cocoa beans but only cocoa products like paste, powder, etc., which Nigeria does not export. All these problems make the adjustment for tariff changes during the period of this study very difficult if not impossible.

Another kind of price change is alterations in the exchange rate of Nigeria or the exchange rates of Nigerian customers. Nigeria, Italy, the United Kingdom and the United States did not alter their exchange rates between 1950 and 1965. On the other hand, France devalued the franc in 1959 while West Germany and the Netherlands revalued the mark and the guilder respectively in 1961. However, the type of equation I set up for exports does not make it practicable to adjust relative price for the effect of exchange rate changes.

E. Empirical Results

The equations are assumed to be linear functions of real GNP and relative prices. They were estimated by ordinary least squares multiple regression technique. The empirical results are shown in tables 7-9.

Empirical Analysis

I. Aggregate imports

Looking at the results, the signs of the regression coefficients conform with a priori expectations. The relative price coefficient is statistically significant at the one per cent level while the real income coefficient

TABLE 7
RESULTS FOR NIGERIA'S AGGREGATE IMPORTS^a

Dependent Variable	B ₀	B ₁	B ₂	R ²	\bar{R}^2	DW	E _{my}	Emp
Ma	227.3783	1.5840 (2.3152)	-2.7115 (-4.9900)	0.7738	0.7390	1.6859	1.7013	-3.5524

^aThe t-statistics are in brackets under each coefficient,

R² = Coefficient of multiple determination,

$\bar{R}^2 = 1 - \frac{(n-1)(1-R^2)}{(n-k)}$ = Coefficient of multiple determination adjusted for

degrees of freedom,

where

n = number of observations (16),

k = number of variables (3).

is significant at the 5 per cent level.

The real income coefficient which is Nigeria's marginal propensity to import (the ratio of a change in the volume of imports to a change in real income) is greater than unity (+1.5840). Furthermore, under ceteris paribus, a unit change in the index of relative prices will bring about a change of some 2.7 units in the volume of aggregate imports.

The coefficient of determination (R^2) is 0.7738. (R^2 is used, instead of \bar{R}^2 , to make my results comparable with Olayide's results--he used R^2 in his discussion.) This is quite encouraging as both real income and relative prices explain 77 per cent of the variability in Nigeria's aggregate import volume.

To see how much the time series data have been susceptible to auto-correlation, the residuals were tested for positive serial correlation using the Durbin Watson statistic. It shows no evidence of the presence of serial correlation at the 5 per cent level of significance.

Lastly, both real income and relative price elasticities have the expected signs. The magnitude of -2.5524 shows a high relative price elasticity for total import demand. This is not a surprise since the period covered by this study witnessed a continuously increasing production of import substitutes in Nigeria. Consequently, any excessive increase in import prices may encourage consumers to replace imports by domestically produced goods.

II: Disaggregated imports

1. Coefficients and their significance

All the signs of real income and relative price coefficients conform with a priori knowledge.

Most of the coefficients are statistically significant. Apart from the coefficient of real income for food, beverages and tobacco (0.1978) and the coefficient of relative prices for crude materials (-0.9273) which are not significant at any reasonable level; and the coefficient of real income for manufactures which is significant at the 5 per cent level, all other coefficients are significant at the one per cent level.

2. Coefficients of determination (R^2)

The explanatory variables account for between 67 and 83 percent of the variance in the volume of each of the categories imported. In general, we may infer that changes in real income and relative prices are very important variables in the determination of any variation in individual category of Nigeria's imports.

The category for fuels provides the best fit, among the five disaggregates, by having the highest coefficient of determination (0.8312). The lowest coefficient of determination is that for food, beverages and tobacco (0.6716). This may be attributed to the existence of other important variables besides the two used here. For instance food importation (which virtually dominated this

TABLE 8

RESULTS FOR NIGERIA'S DISAGGREGATED IMPORTS

Dependent Variable	b ₀	b ₁	b ₂	R ²	\bar{R}^2	DW	Emy	Emp
Mfbt	387.0376	0.9870 (0.1978)	-3.0367 (-4.7301)	0.6716	0.6210	1.3665	1.0032	-3.8310
Mcm	-136.8018	2.5583 (4.7245)	-0.3988 (-0.9273)	0.7000	0.6539	1.3198	5.0939	-0.9636
Mf	113.6671	2.0696 (4.2002)	-2.1872 (-5.5890)	0.8537	0.8312	2.0076	2.7768	-2.1927
Mm	182.2942	0.9653 (1.7134)	-1.8043 (-4.0323)	0.6817	0.6329	1.5659	1.0890	-2.5058
Mcg	- 7.5021	2.3304 (4.0276)	-1.4488 (-3.1527)	0.7580	0.7207	1.2551	4.7370	-3.6235

Each dependent variable is the index of the volume of imports for each commodity

group where

fbt = food, beverages and tobacco,
cm = crude materials
f = fuels
m = manufactures
cg = capital goods

category in relative and absolute terms during the period of this study--see Appendix IV), would be responsive to changes in the size of the population--population statistics, on an annual basis, for Nigeria were unreliable for the period covered by this study.

3. Serial correlation

At the 5 per cent level of significance both fuels and manufactures show no positive serial correlation. The other three categories--food, beverages and tobacco, crude materials and capital goods--were tested for positive serial correlation at the one per cent level and none shows any evidence of the presence of serial correlation.

4. Elasticities

All the elasticities turn out to have the expected signs. Generally, most of the elasticities are high. The demand for imports of food, beverages and tobacco is very elastic with respect to changes in prices (-3.8310). This is not surprising since most of the items (beer, tobacco, milk, meat and stockfish) are being produced domestically.

As would be expected, the demand for crude materials is inelastic (in fact the least elastic of all the categories) with respect to relative prices because most of the imported items under the category cannot be produced in Nigeria.

Both real income and price elasticities for capital goods' imports are very high, in fact the relative price

elasticity is higher than one would expect, as the level of domestic substitution for imported capital goods is less than that of manufactures. Earlier on, an attempt was made to use the corrected import price (P_m), instead of relative prices $\frac{(P_m)}{(P_n)}$, because of the very low level of import substitution for capital goods. In the result, apart from being insignificant, the price variable gave a wrong sign.

The fuel category seems to have performed best--with the highest coefficient of determination (i.e., the best fit); the most significant, using the t-ratio; and with high real income and relative price elasticities. Thus, on the basis of the results for the disaggregates, the category for fuels contains the most reliable predictive content.

5. Comparison with Olayide's

Even though the econometric work of Olayide on Nigeria's import demand is on commodity basis (fish, flour, salt, sugar, alcoholic beverage, tobacco--unmanufactured, jute bags and sacks, cotton goods--unbleached, bleached and printed, cement, kerosene, motor spirit, milk and biscuits and cakes)¹ as opposed to commodity groups used in my analysis, it may be interesting to compare my results with his.

My analysis covers the period 1950-65 while Olayide

¹Olayide, op. cit., p. 315.

uses time series data covering a seventeen year period 1948-64. Instead of the two explanatory variables (real income and relative prices--with import prices corrected for changes in the value of import duty) used in my equations, Olayide uses four explanatory variables--import prices, disposable income defined as total export earnings for each year, trade restriction defined as the value of import duty and a trend variable measured in years. Olayide does not estimate elasticities.

Many of the coefficients of Olayide's analysis are not statistically significant and 6 of his 15 equations show evidence of serial correlation. In contrast, most of the parameters of my result are statistically significant and only one shows any evidence of serial correlation. While the independent variables of my equations account for between 67 and 83 per cent of the variability in the volume of the imports of the commodity groups, those of Olayide's equations are responsible for between 45 and 97 per cent of the fluctuations in the volume of the commodities imported.

The probably reasons for the better performance of my econometric work may be as follows: (1) the use of real income in my analysis while Olayide uses value of export earnings as his income variable. (2) I use relative price $\frac{P_m}{P_n}$ with P_m corrected for the effect of import duty while Olayide uses uncorrected import price. (3) The use of the value of import duty as a measure of trade restriction might have contributed to the poor performance of some of Olayide's

equations. In fact, in my opinion, the way he uses import duty as a measure of trade restriction is inappropriate. He ought to have expressed the value of import duty collected as a percentage of total value of exports.

III: Disaggregated exports

1. Dummy variable

First, I will explain the use of the dummy variable which was applied to the equation of exports to the United Kingdom.

Initially, the volume of Nigeria's exports to the United Kingdom was regressed on the United Kingdom's real GNP and relative prices. The statistical result was insignificant. Moreover, while the relative price variable had the correct sign, the real income variable had the wrong sign.

Looking at the data for the volume of exports, it was evident that some unusual trade movements must have occurred. A dummy variable was included to account for the nonconvertibility of the British pound until 1958 (i.e., the value 0 for inconvertibility, 1950-57, and 1 for convertibility, 1958-65, of sterling).

The addition of the dummy variable as an independent variable together with real income and relative prices was found to be of some usefulness. The estimated coefficients of the three explanatory variables carry the right signs.

TABLE 9

RESULTS FOR THE DEMAND FOR NIGERIA'S EXPORTS

Country	A ₀	A ₁	A ₂	R ²	\bar{R}^2	DW	E _{xy}	Exp
France	47.3435	1.9531 (7.5827)	-1.1178 (-2.4424)	0.8187	0.8024	3.3673	1.9164	-1.3412
Italy	-59.8267	1.4153 (6.8349)	0.9246 (-.7536)	0.7832	0.7498	1.0593	1.2197	-1.0416
Netherlands	-65.5426	0.9297 (5.8288)	-1.3024 (-1.7625)	0.7237	0.6812	1.8081	1.3929	-1.9243
United Kingdom ^a	85.2240	0.2503 (1.4206)	-0.7445 (-1.9753)	0.5807	0.5159	1.6701	0.3251	-1.0166
United States	88.8663	0.4194 (2.4255)	-0.5447 (-1.7927)	0.4180	0.3285	1.2521	0.6850	-0.7021
West Germany	-70.8070	1.8781 (14.6251)	-1.4527 (-2.6954)	0.9442	0.9357	1.1650	1.7381	-0.9614

^aDummy variable: A₃-14.9504
(-1.9621)

The t-ratios for the relative price and the dummy variables are statistically significant at the 5 per cent level. Only the real income variable is not significant at the 5 per cent level. The goodness of fit is improved with the addition of the dummy variable. Thus, the three explanatory variables explain 58 per cent of the variance in export volume.

2. Coefficients and their significance

Every coefficient of the six equations has the expected sign.

The marginal propensity of France, Italy and West Germany to import from Nigeria is greater than unity (as expressed by the coefficient of real income) while that of the Netherlands, the United Kingdom and the United States is less than unity. In other words, a unit change in the index of real income will lead to a change, in the same direction, of about 2.0 in France--the highest--and only 0.3 in the United Kingdom--the lowest--in the volume of Nigerian exports. Also, other things held constant, the results show that a one unit change in the index of relative prices is associated with a change in the opposite direction of 1.5 points (West Germany) and between 0.5 and 1.3 points (for the rest of the five countries) in the index of export volume. If Nigerian export prices rise relative to world export prices of primary products, then Nigerian exports decline. This is the normal case of the downward

sloping demand function.

The use of the world export price index of primary products for P_w , instead of the general world export price index used initially, increased the magnitude of the relative price coefficient for each of the six equations.

A test for statistical significance shows that while the relative price coefficient for the United Kingdom and the real income coefficient for Italy are not significant at the 5 per cent level, the real income coefficient for the United States and the relative price coefficient for France, the Netherlands, the United Kingdom and the United States are significant at the 5 per cent level. The remaining coefficients are significant at the one per cent level.

3. Coefficient of determination (\bar{R}^2)

The range of the percentage that the independent variables account for in the variability in the volume of exports going to the different countries is very wide--from a low of 32 per cent for export volume to the United States to as high as 94 per cent for the export volume to West Germany. The explanatory variables explain only 32 per cent of the variance in the volume of exports directed to the United States. This is a poor fit. However, I find it difficult to explain this poor fit. The use of semi-log equations for export volume to the United Kingdom and the United States was not found to be useful. The coefficients

of Y and $\frac{P_x}{P_w}$ for the export equation to the United Kingdom are reduced without substantial improvement in the coefficients of the two independent variables for the export equation to the United States. Moreover, all the t -ratios for both equations of export volume to the United Kingdom and the United States are reduced.

4. Serial correlation

The Durbin-Watson statistic for the export volume equation for France was tested for negative serial correlation (because of its high magnitude) and at the one per cent level of significance it shows evidence of negative serial correlation. The Durbin-Watson statistics for the other equations were tested for positive serial correlation. The tests with respect to equations for Italy and West Germany are inconclusive while those for the Netherlands, the United Kingdom and the United States show no sign of positive serial correlation at the one per cent level.

5. Elasticities

Most of the elasticities of real income and relative prices are greater than unity. These results contradict the belief by many less developed countries that the price elasticity of primary products is low. However, the obstacles that may hinder very reliable statistical investigation into price relations, which I have pointed

out earlier (tariff changes and exchange rate changes), might have affected these results. Hence, I would hesitate to state categorically that the argument of the less developed countries as regards the elasticity of demand for primary products is unfounded. Further, these elasticities may have been biased upwards due to a mis-specification (i.e., some important variables may have been omitted)¹ from the equation for exports.

F. Application of the Empirical Results

Accepting most of the results of the import demand equations as significant, some of the parameters (the marginal propensity to consume and the elasticity) can be used for policy purposes.

The relative price elasticity is useful in measuring the degree of substitutability between imports and domestically produced goods. Thus, it can help the government to determine how far it can or should formulate economic policies based upon the sensitivity of Nigeria's imports to changes in relative prices. Judging from the high relative price elasticity of Nigeria's import demand, we may conclude that any policy by suppliers, say from the United Kingdom

¹H. Theil, Economic Forecasts and Policy, (Amsterdam: North-Holland Publishing Company, 1965), p. 327.

or the EEC, to lower their prices (devalue) would increase the volume of their exports to Nigeria more than proportionately.

The marginal propensity to import can be used in judging importers' behaviour as real income rises. For instance, an attempt to estimate the future volume of Nigeria's imports could be based on an appraisal of the country's marginal propensity to import.

On the export side, the relative price elasticities of exports can be used, with some degree of reliability, to forecast how Nigerian customers would react in case of any devaluation of the Nigerian currency.

Summary

All coefficients for imports and exports have the expected signs and most of them are statistically significant. Nigeria's demand for imports is largely determined by changes in real income and relative prices. Generally, the pattern is one of very elastic demand for imports and less elastic demand for exports. Finally, most of the results of the statistical investigation offer some basis for reliable prediction.

CHAPTER V

PROSPECTS AND CONCLUSIONS

Thus far, this study has outlined the features of the Nigerian economy, surveyed the structure of Nigeria's exports and imports, discussed the directional flow of the country's merchandise trade, and examined the main determinants of her imports and exports. The purpose of this closing chapter is twofold: to examine, in short compass, the problems and prospects of the main export commodities of Nigeria; and secondly to point out some policy implications in form of concluding remarks.

A. Commodity Prospects

Even though import substitution would continue to alter the pattern of the imports of Nigeria, it would not reduce the total volume of imports either in absolute value or as a percentage of the GDP (mainly because of the great need for capital goods and raw materials). To prevent a trade gap from developing, export earnings have to be increased. What are the prospects that the main export commodities of Nigeria could do the job? This is the question to be attempted in this section.

Forecasts and projections have been made about some of the primary products in which Nigeria is interested. Much

reliance will be on two studies¹ in appraising Nigeria's commodity prospects.

1. Cocoa

Nigeria is the second largest producer of cocoa in the world, accounting for about 19 per cent of total exports.²

For quite a while there has been much uneasiness concerning the condition of the world cocoa market. Production has outpaced consumption thereby lowering price which in 1965 dropped to its lowest in twenty years.

The future development in the consumption of cocoa will depend very much on what happens in Western Europe and North America which account for about three-quarters of world consumption of cocoa products and the bulk of the chocolate manufacturing industries of the world.³ In 1963-64, 80 to 90 per cent of Nigeria's cocoa was exported to this area, i.e., the United Kingdom, the EEC and the United States.⁴

According to the FAO projections, the longterm rate of growth of world cocoa grindings between 1965 and 1975 is expected to be about 3 per cent per year in contrast with a yearly growth of 5.6 per cent in 1956-65.⁵ The projection shows that Nigeria can expand her cocoa production to

¹Bela Belassa, Trade Prospects for Developing Countries (Homewood, Illinois: Richard D. Irwin, Inc., 1964); FAO, Agricultural Development, op. cit.

²Ibid., p. 45.

³Ibid., p. 45.

⁴Ibid., p. 45.

⁵Ibid., p. 45.

compensate for the decline in prices. However, if such a policy generated competitive expansion by other producing countries, this would cause a further decline in cocoa prices.

In summary, the longterm outlook for cocoa price and consumption is not bright. Indications are that the growth of cocoa will continue to outstrip that of consumption. Presently, an attempt to reach an international agreement on a price range to limit price fluctuations seems to be the subject of intractable problems. I cannot foresee any effective way of solving the cocoa problem until an international agreement is reached. Then export quotas may be devised along with a guaranteed reasonable minimum price.

2. Crude petroleum

As already noted, petroleum has become Nigeria's leading primary export.

Future demand for crude petroleum and petroleum products would depend very much on consumers' domestic policies (especially as regards limitations on crude petroleum imports), the pace of oil exploration in the developed countries and the rate of growth of consumers' domestic demand.¹ Already, quantitative controls have been taken by some developed countries (to protect their domestic energy resources) and this may limit the expansion of crude

¹Belassa, Trade Prospects, op. cit., p. 282.

petroleum exports.

However, the exports of Nigerian petroleum to the United Kingdom (the most important buyer) and other West European countries are likely to expand.¹

Belassa forecasts a small downward movement of unit value of petroleum between 1960 and 1975.²

Granting a small decline in unit value and a low rate of export expansion, petroleum would definitely continue to be Nigeria's major foreign exchange earner in the foreseeable future.

3. Palm produce

From about 1946 to 1966, Nigeria was responsible for about one-fourth of palm oil and almost a half of palm kernels entering world trade.³

The exports of palm oil and palm kernels face the problem of sluggish growth because of the expansion of domestic production of fats and oil (which are substitutes for palm oil and palm kernels) by the industrialised countries. This has led to an annual growth of only one per cent in world demand for fats and oil in 1960-70.

However, Nigeria may be able to increase her exports

¹Ibid., p. 284.

²Ibid., pp. 285-287.

³S. A. Oni, "Production Response in Nigeria Agriculture: A Case Study of Palm Produce, 1949-1966," The Nigerian Journal of Economic and Social Studies (March, 1969), p. 81.

at a higher rate than this one per cent annual rise in import demand because some traditional exporters of fats and oil (Asia and the Far East) have been exporting at a decreasing rate--with an expectation of further decrease--due to the pressure of domestic demand.¹

4. Groundnuts

Nigeria provides some 40 per cent of world exports of groundnuts.² In 1965-67 groundnuts was Nigeria's greatest single agricultural export commodity (19.9 per cent of overall total export income).

Presently, the bulk of export earnings from groundnut products is accounted for by groundnuts with groundnut oil and cake accounting for very little. But by 1980, half of exports will be in the form of nuts and half as oil.³

Generally, Nigeria would have a reasonable prospect of increasing her groundnut exports at an annual rate of about 3 per cent between 1962 and 1980.⁴

5. Natural rubber

Relatively speaking, natural rubber is of very little significance in the aggregate income of Nigeria's export crops. The country is responsible for only about 2 per cent of the quantity of natural rubber that enter world trade.⁵

¹FAO, Agricultural Development, op. cit., p. 27.

²Ibid., p. 28.

³Ibid., p. 27.

⁴Ibid., p. 27

⁵Ibid., p. 28.

The expanding technical efficiency of synthetic rubbers would result in growing competition which would reduce the need for natural rubber.

The expectation of a fall in unit value of natural rubber¹ along with an increase in Nigeria's domestic use of rubber would likely reduce the relative importance of this crop in the country's export content.

6. Raw cotton

In view of the very high domestic requirements, the availability of cotton for exports would likely be determined by the extent to which Nigeria's domestic textile production is expected to substitute for imported textiles.

On the whole, one may conclude that Nigeria's commodity exports, despite the problems they face, have some bright prospects. These export products (especially crude petroleum) would continue to be very significant determinants of the country's capacity to import the strategic capital goods that are essential to her economic development.

B. Concluding Remarks

As pointed out in Chapter 1, section B, Nigeria has some export crops that are of minor importance at present. While none of them appears to hold immediate possibilities of expansion, one or two may, through intensive

¹Belassa, Trade Prospects, op. cit., p. 230.

research and modernization of the agricultural sector by all the governments of the Federation, become much more important as foreign exchange earners. Any such move towards diversification of export commodities would be to Nigeria's advantage.

Secondly, as Nigeria's prosperity and economic development depend largely on export earnings, it is not only to diversify exports that must be considered a source of economic strength and security, but also the availability of a variety of markets for the disposal of the products. Hence the Federal Government, who holds the sole responsibility for external trade, would do well not only to exploit the present markets further but also to pay more attention to the search for new markets most especially in Africa.

As a corollary of market expansion, Nigeria should reopen her attempt to become an associate member of the EEC. This would become much more essential once the United Kingdom joined the Community. Furthermore, Nigeria should see to it that the proposed West African Common Market is effected.

Fourthly, Nigeria should continue to play an active role in the current attempt to reach international agreements on cocoa and fats and oil (negotiations on these products are on under the auspices of UNCTAD). The imposition of export quotas and reasonable price floor would lessen the fluctuations in export earnings from these crops.

Fifthly, Nigeria can further reduce the level of

her consumer goods' importation, especially manufactures, without impairing the general welfare of the people.

(This is because the expanding import replacement--which has been highly stimulated during the civil war due to severe import restrictions--is heavily concentrated on consumer goods.) The foreign exchange thus saved should be diverted to the purchase of strategic capital goods which are not and would not be subjected to much domestic substitution in the nearest future.

Lastly, even though some econometric work has been done on the determinants of Nigeria's imports, only very little (in fact none to my knowledge) has been done to examine the factors affecting Nigeria's exports. This is a field where researchers can devote some attention with the ultimate aim of knowing more about the variables that determine Nigeria's export demand both at the aggregate and disaggregated levels.

APPENDIX I

COMPOSITION OF NIGERIA'S EXPORTS SELECTED YEARS (£ MILLION)

Sector/Exports	1900	1929	1939	1956	1957	1958	Average 1956-58	1965	1966	1967	Average 1965-67
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Agricultural (including forest) products	1.7	14.8	7.0	109.5	105.9	117.9	111.1	158.8	146.5	135.8	147.1
Cocoa	--	2.3	1.8	24.0	26.0	26.7	25.6	42.7	28.3	54.7	41.9
Palm kernels	0.8	4.3	1.9	20.4	18.0	20.5	19.6	26.5	22.4	7.8	18.9
Palm oil	0.7	3.8	0.9	14.9	13.8	12.7	13.5	13.6	11.0	1.3	8.6
Groundnuts (including oil and cake)	--	2.5	1.1	31.8	24.6	30.7	29.0	53.1	55.5	46.8	51.8
Rubber	--	0.2	0.1	6.4	7.0	7.6	7.0	10.9	11.5	6.3	9.6
Raw cotton	--	0.5	0.2	7.1	6.3	7.8	7.1	3.3	5.2	6.5	5.0
Timber (log & sawn)	--	0.3	0.1	3.5	4.3	5.3	4.4	4.3	6.8	7.7	6.3
Hides and skin	--	0.9	0.7	3.0	3.1	3.3	3.1	4.4	5.8	4.7	5.0
Bananas	--	--	0.3	2.4	2.8	3.3	2.8	--	--	--	--
Minerals and mineral products	--	2.3	2.4	9.0	8.3	5.5	8.3	83.0	107.4	85.1	91.8
Crude petroleum	--	--	--	--	--	0.9	1.0	68.1	92.0	72.1	77.4
Tin ore and metal	--	2.3	2.4	7.2	7.6	4.0	6.3	14.6	15.4	13.0	14.4
Columbite	--	--	--	1.8	0.7	0.5	1.0	--	--	--	--

APPENDIX I--Continued

Sector/Exports	1900 (1)	1929 (2)	1939 (3)	1956 (4)	1957 (5)	1958 (6)	Average 1956-58 (7)	1965 (8)	1966 (9)	1967 (10)	Average 1965-67 (11)
Manufactures and semi-manufactures	--	--	--	1.2	1.0	1.4	1.2	2.7	3.1	2.6	2.8
Other exports	0.2	0.5	0.8	12.6	9.0	8.0	5.1	18.8	28.7	14.6	18.3
Total	1.9	17.8	10.5	132.3	124.2	132.8	125.7	263.3	278.7	238.1	260.0

Sources: Columns 1-6: Helleiner, Peasant Agriculture, op. cit., Table IV-A-7.

Column 7: Average of columns 4-6.

Columns 8-10: Nigeria Year Book, 1969, p. 139.

Column 11: Average of columns 8-10.

APPENDIX II

COMPOSITION OF NIGERIA'S EXPORTS AS PERCENTAGES OF TOTAL EXPORTS 1956-58; 1965-67

Sector/Exports	1956 (1)	1957 (2)	1958 (3)	1965 (4)	1966 (5)	1967 (6)
Agricultural (including forest) products	87.2	86.4	90.4	64.4	53.1	56.2
Cocoa	18.1	21.0	20.1	16.2	10.2	23.0
Palm kernels	15.5	14.5	15.4	10.1	8.0	3.3
Palm oil	11.2	11.1	9.5	5.2	4.0	0.5
Groundnuts (including oil and cake	25.0	19.9	24.0	20.1	19.7	19.7
Rubber	4.8	5.7	5.7	4.1	4.1	2.6
Raw cotton	6.1	5.1	6.7	1.9	2.6	3.5
Timber (log and sawn)	2.6	4.0	4.0	2.9	2.4	1.8
Hides and skin	2.1	2.4	2.5	1.7	2.1	1.8
Bananas	1.8	2.3	2.5	2.2	--	--
Minerals and mineral products	6.8	6.7	4.9	31.4	38.7	35.8
Crude petroleum	--	--	0.7	25.9	33.0	30.3
Tin ore and metal	5.5	6.1	3.9	5.5	5.7	5.5
Columbite	1.3	0.6	0.3	n.a.	n.a.	n.a.
Manufactures and semi-manufactures	0.8	0.8	0.9	1.0	1.0	1.1
Other exports	5.2	6.9	4.0	3.2	7.2	6.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Columns 1-3: Helleiner, Peasant Agriculture, op. cit., Table IV-A-16.
Columns 4-6: Nigeria Year Book, 1969, p. 139.

APPENDIX III

NIGERIA'S IMPORTS: CLASSIFICATION BY SITC CATEGORIES SELECTED YEARS (£ MILLION)

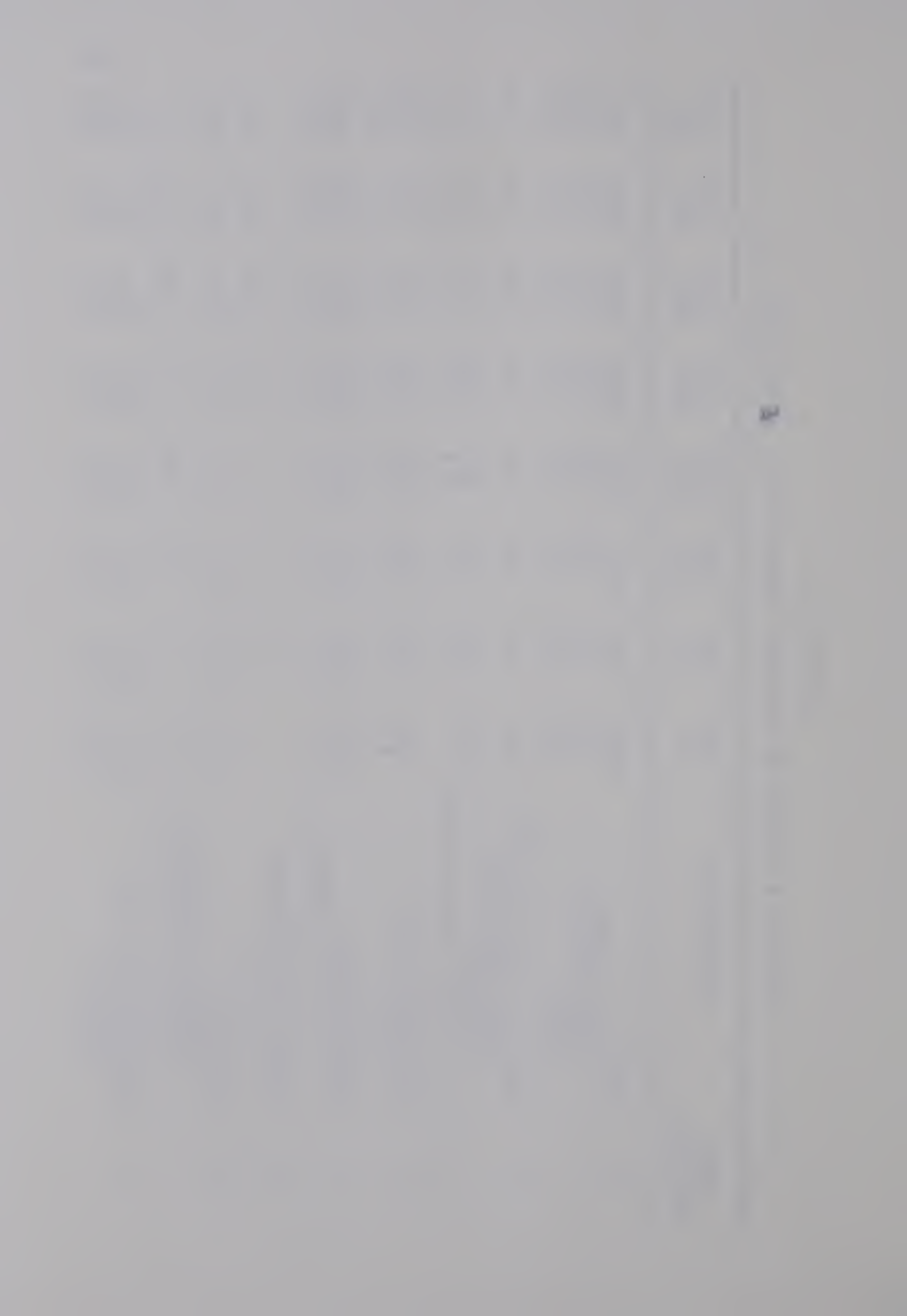
SITC Sections	Commodity Groups	1950 (1)	1954 (2)	1959 (3)	1964 (4)	1965 (5)	1966 (6)	1967 (7)
0	Food and live animals	3.3	12.0	20.8	20.6	23.0	25.8	21.3
1	Beverages and tobacco	3.0	4.5	5.8	2.9	2.0	2.3	1.8
2	Crude materials mainly inedible except fuel	1.3	1.5	2.1	5.0	6.6	7.2	5.8
3	Mineral fuels, lubricants and related materials	4.0	5.6	10.4	19.5	17.4	3.8	8.8
4	Animal and vegetable oils and fats	--	--	0.1	0.1	0.2	0.2	0.3
5	Chemicals	2.3	4.8	10.1	17.1	20.2	10.8	21.3
6	Manufactured goods	31.9	54.2	65.9	89.6	90.0	79.3	72.3
7	Machinery and transport equipment	10.9	20.1	43.9	74.9	92.4	95.5	71.6
8	Miscellaneous manufactured articles	3.6	9.4	17.8	21.1	20.5	18.8	17.4
9	Miscellaneous commodities	--	1.8	2.6	2.9	2.8	2.8	3.0
0-9	Total	60.3	113.9	179.4	253.9	275.2	256.4	223.6

Sources: Columns 1-3: Robson and Lury, eds., Economies of Africa, op. cit., p. 181.
Columns 4-7: United Nations, Yearbook of International Trade Statistics,
1967.

APPENDIX IV

NIGERIA'S IMPORTS OF SELECTED ITEMS 1960-67 (£ MILLION)

SITC Sections	Commodities	1960 (1)	1961 (2)	1962 (3)	1963 (4)	1964 (5)	1965 (6)	1966 (7)	1967 (8)
0	Food	23.9	22.7	23.5	21.9	20.6	23.0	25.8	21.3
	Stock fish ^a	7.9	7.6	7.2	6.5	6.2	6.7	6.9	4.5
	Flour (wheat)	2.6	3.2	3.0	3.4	2.2	3.4	5.7	4.6
	Sugar	3.2	3.0	3.2	3.4	2.9	2.5	2.5	2.8
1	Beverages and tobacco ^b	6.1	6.1	4.8	2.9	2.9	2.0	2.3	1.8
	Beer (including stout)	3.9	3.9	2.8	0.9	0.8	.	.	.
	Tobacco (manufactured)	.	0.2	.	0.2	0.2	0.2	0.2	0.1
2	Crude materials	2.1	2.5	2.4	3.1	5.0	6.6	7.2	5.8
	Salt	1.9	2.1	2.0	2.3	2.0	2.4	2.3	2.3
3	Mineral fuels	11.3	13.4	14.1	15.5	19.5	17.3	3.8	8.8
	Petroleum products	11.2	13.3	13.9	15.4	19.3	17.1	3.5	8.2
4	Animal and vegetable oil and fat	--	--	--	--	0.1	0.2	0.2	0.3
5	Chemicals	12.3	12.6	12.3	14.5	17.1	20.2	20.7	21.3
	Medical and pharmaceutical products	4.6	5.1	4.6	5.8	5.1	5.8	5.8	5.5
6	Manufactured goods	81.1	87.5	73.6	74.2	88.6	90.3	79.3	72.3
	Textiles	41.1	42.3	35.3	34.7	40.1	41.6	32.3	33.0
	Cement	5.4	3.7	2.4	2.0	1.2	1.3	1.4	1.2



APPENDIX IV--Continued

SITC Sections	Commodities	1960 (1)	1961 (2)	1962 (3)	1963 (4)	1964 (5)	1965 (6)	1966 (7)	1967 (8)
7	Machinery and transport equipment	51.6	50.3	48.3	50.6	74.9	92.4	95.5	71.6
	Electrical equipment	9.6	8.2	10.8	9.9	12.4	19.4	21.7	16.3
	Road motor vehicles	17.8	19.6	12.5	14.8	21.8	22.4	19.8	20.0
8	Miscellaneous commodities	23.9	23.8	21.7	21.3	21.1	20.5	18.8	17.4
	Footwear	3.7	3.3	2.8	2.7	2.5	1.5	1.1	1.0
0-9	Total	179.4	222.0	203.0	207.5	253.9	275.1	256.4	223.6

^aFish, salted, dried or smoked.

^bCigars and cigarettes.

Sources: United Nations, Yearbook of International Trade Statistics, 1962, 1963, and 1967.

Adedeji, Nigerian Finance, op. cit., p. 176.

APPENDIX V

DISTRIBUTION OF NIGERIA'S EXPORTS^a BY DESTINATION SELECTED YEARS (£ MILLION)

Country or Area	1900 (1)	1929 (2)	1939 (3)	1953 (4)	1963 (5)	1967 (6)
United Kingdom	0.93	7.82	6.22	96.95	74.00	70.32
Total EEC	--	--	--	7.07	69.35	96.23
France	0.07	1.46	0.68	0.34	15.90	22.43
Germany ^b	0.84	3.42	1.19	2.50	17.26	25.57
Italy	--	--	--	0.71	9.56	14.11
Belgium and Luxembourg	--	--	--	0.29	4.65	3.15
Netherlands	--	1.44	0.67	3.23	21.98	30.79
United States	--	2.55	1.09	14.28	17.36	18.48
Japan	--	--	--	--	2.38	6.14
Other countries	0.05	0.89	0.37	2.58	21.84	46.95
Total	1.89	17.76	10.47	120.88	184.93	238.12

^aExcludes re-exports.

^bRefers to West Germany since 1954.

Sources: Columns 1-3: Helleiner, Peasant Agriculture, op. cit., Table IV-A-14.
Columns 4-6: United Nations, Yearbook of International Trade Statistics,
1955 and 1967.

APPENDIX VI

DISTRIBUTION OF NIGERIA'S IMPORTS BY SOURCES SELECTED YEARS (£ MILLION)

Country or Area	1900 (1)	1929 (2)	1939 (3)	1953 (4)	1963 (5)	1967 (6)
United Kingdom	0.14	9.32	3.65	57.40	70.84	64.57
Total EEC	--	--	--	19.01	44.21	57.65
France	--	0.31	0.07	1.00	7.46	9.42
Germany ^a	0.19	1.32	0.52	8.76	15.36	25.23
Italy	--	--	--	3.95	8.33	10.75
Belgium and Luxembourg	--	--	--	1.30	2.91	2.91
Netherlands	0.84	0.49	0.19	4.00	10.51	9.34
United States	--	1.01	0.48	4.25	17.90	27.85
Japan	--	--	0.21	5.58	26.95	18.75
Other countries	0.57	0.77	1.85	21.93	47.58	64.63
Total	1.74	13.22	6.76	108.17	207.48	233.55

^aRefers to West Germany since 1954.

Sources: Columns 1-3: Helleiner, Peasant Agriculture, op. cit., Table IV-A-15.
Columns 4-6: United Nations, Yearbook of International Trade Statistics,
1955 and 1967.

APPENDIX VII

GEOGRAPHICAL DISTRIBUTION OF NIGERIA'S TRADE 1963-67 (£ MILLION)

Country or Area	Exports (f.o.b.)					Imports (c.i.f.)				
	1963 (1)	1964 (2)	1965 (3)	1966 (4)	1967 (5)	1963 (1)	1964 (2)	1965 (3)	1966 (4)	1967 (5)
Commonwealth countries										
United Kingdom	73.8	80.7	101.5	105.2	70.3	70.8	78.7	85.1	76.3	64.6
Canada	1.9	2.5	2.5	9.8	8.9	0.9	1.8	2.0	3.1	1.7
Hong Kong	0.3	0.6	--	--	0.1	5.2	4.7	3.6	1.8	2.6
India	0.4	0.7	0.3	0.2	0.2	3.2	4.2	4.0	3.2	3.2
Pakistan	--	--	--	--	--	1.5	2.6	4.2	6.5	3.2
Total EEC	69.3	76.6	93.2	100.5	98.7	45.0	58.8	68.2	67.8	57.5
France	15.9	10.0	18.2	25.9	22.4	7.5	9.9	12.2	14.5	9.4
West Germany	17.1	26.9	27.9	27.8	25.6	15.4	22.5	29.5	27.5	25.2
Italy	9.6	7.5	10.9	13.7	14.1	9.0	12.9	12.7	13.0	10.7
Belgium and Luxembourg	4.7	5.2	4.7	7.1	3.2	2.9	3.3	3.4	3.5	2.9
Netherlands	22.0	27.0	31.5	26.1	30.8	10.2	10.2	10.4	9.3	9.3
Czechoslovakia	--	--	1.0	1.0	0.8	3.0	2.5	2.3	2.5	2.6
Denmark	2.4	2.4	2.8	3.5	3.4	1.4	1.4	1.4	1.3	1.2
Norway	0.9	0.8	0.7	0.5	0.2	5.7	4.9	5.7	6.8	4.6
Portugal	1.8	1.5	4.6	1.9	5.3	0.3	0.8	0.2	0.3	0.6
Spain	2.4	2.1	3.0	1.0	4.4	1.3	2.4	1.7	0.4	0.6
Sweden	1.1	1.4	1.7	3.7	4.3	1.7	2.2	3.5	2.9	2.2
Switzerland	1.5	1.3	2.2	3.0	2.0	1.3	1.8	2.6	2.3	2.3
United States	17.4	14.3	26.2	22.3	18.5	17.9	28.9	33.1	41.5	27.9



APPENDIX VII--Continued

Country or Area	Exports (f.o.b.)					Imports (c.i.f.)				
	1963 (1)	1964 (2)	1965 (3)	1966 (4)	1967 (5)	1963 (1)	1964 (2)	1965 (3)	1966 (4)	1967 (5)
Brazil	--	--	0.3	1.7	3.0	--	--	--	--	--
China--mainland	0.3	0.6	0.7	--	0.9	1.5	3.1	4.9	5.0	6.3
Japan	2.4	2.6	3.2	4.3	6.1	26.9	30.8	25.6	14.3	18.8
U.S.S.R.	--	1.6	2.4	0.3	4.0	--	--	0.3	0.5	1.1
Africa	4.1	.	3.9	3.3	2.4	.	.	3.1	2.2	2.4
Other countries	4.9	12.6	13.1	17.5	4.6	19.9	24.3	23.6	17.7	20.8
Total	184.9	210.5	263.3	278.7	238.1	207.5	253.9	275.1	256.4	223.6

Source: United Nations, Yearbook of International Trade Statistics, 1963 and 1967.

APPENDIX VIII

GEOGRAPHICAL DISTRIBUTION OF NIGERIA'S TRADE IN PERCENTAGES, 1963-67

Country or Area	Exports (f.o.b.)					% change 63-67	Imports (c.i.f.)					% change 63-67
	1963 (1)	1964 (2)	1965 (3)	1966 (4)	1967 (5)		1963 (1)	1964 (2)	1965 (3)	1966 (4)	1967 (5)	
Commonwealth countries												
United Kingdom	39.9	38.7	38.5	37.7	29.5	- 5.0	34.2	30.9	30.0	29.7	28.7	- 8.9
Canada	1.0	1.1	0.9	3.5	3.0	+368.9	0.4	0.7	0.7	1.2	0.7	+ 8.9
Hong Kong	--	--	--	--	--	--	2.5	1.0	1.3	0.7	1.2	+ 49.5
India	--	--	0.1	0.1	0.1	--	1.5	1.2	1.4	1.2	1.4	0.0
Pakistan	--	--	--	--	--	--	0.7	1.0	1.5	2.5	1.4	+119.9
Total EEC	37.5	36.5	36.6	36.1	40.2	+ 38.5	21.6	23.1	24.9	26.4	25.6	+ 30.4
France	8.7	4.8	6.9	9.3	9.4	+ 41.0	3.6	3.9	4.4	5.6	4.2	+ 26.3
W. Germany	9.1	12.8	10.6	10.0	10.6	+ 48.1	7.4	8.8	10.7	10.7	11.3	+ 64.3
Italy	5.2	3.6	4.2	4.9	5.9	+ 47.6	4.3	5.1	4.8	5.1	4.6	+ 29.1
Belgium and Luxembourg	2.6	2.5	2.9	2.5	1.3	- 32.2	1.4	1.3	1.2	1.4	1.3	0.0
Netherlands	11.9	12.8	12.9	9.4	12.9	+ 51.8	4.9	4.0	3.8	3.6	4.2	- 8.0
Czechoslovakia	--	--	0.4	0.4	0.4	--	1.4	1.0	0.9	1.0	1.2	- 33.2
Denmark	1.2	1.1	1.1	1.3	1.4	+ 41.7	0.7	0.6	0.6	0.5	0.5	- 14.3
Norway	0.5	0.4	0.3	0.2	0.2	- 77.8	2.7	1.1	2.1	2.6	2.1	- 19.4
Portugal	1.0	0.7	2.9	0.7	2.2	+194.4	0.1	0.2	--	0.1	0.3	+100.0
Spain	1.4	1.0	1.1	0.4	1.9	+ 83.3	0.6	0.9	0.6	0.1	0.2	- 53.8
Sweden	0.5	0.7	0.6	1.3	1.9	+290.0	0.8	0.9	1.2	1.1	0.9	+ 12.5

APPENDIX VIII--Continued

Country or Area	Exports (f.o.b.)					Imports (c.i.f.)						
	1963	1964	1965	1966	1967	% change 63-67	1963	1964	1965	1966	1967	% change 63-67
	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)	
Switzerland	0.7	0.6	0.6	1.2	0.9	+ 33.3	0.6	0.7	0.9	0.9	0.9	+ 43.5
United States	9.3	6.8	9.9	8.0	7.8	+ 6.5	8.5	11.3	12.0	16.2	12.5	+ 55.6
Brazil	--	--	0.1	0.6	1.3	--	--	--	--	--	--	--
China--mainland	0.2	0.3	0.4	--	0.3	+200.0	0.8	1.1	1.8	2.0	2.8	+296.8
Japan	1.2	1.2	1.2	1.5	2.6	+154.1	13.0	12.0	9.3	5.6	8.3	- 30.4
U.S.S.R.	--	0.7	0.9	0.1	1.3	--	--	--	0.1	0.2	0.5	--
Africa	2.2	--	1.5	1.2	1.0	- 41.5	.	.	1.1	0.9	1.0	--
Other countries	2.7	6.0	4.9	6.1	1.9	- 7.3	9.5	9.2	8.6	6.9	9.3	+ 4.5
Total	100.0	100.0	100.0	100.0	100.0	+ 28.8	100.0	100.0	100.0	100.0	100.0	+ 7.8

Source: Calculated from Appendix VII.

APPENDIX IX

NIGERIA'S CONSUMER PRICE INDEXES
1950-65 (1948=100)

	Western Region (1)	Eastern Region (2)	Northern Region (3)	Average ^a (4)
1950	98.6	108.5	99.9	103
1951	129.8	133.5	138.6	134
1952	125.7	137.2	124.8	130
1953	112.5	135.5	110.7	120
1954	118.2	151.8	99.5	123
1955	121.5	142.3	98.6	121
1956	128.3	151.8	104.0	128
1957	131.7	151.8	104.2	129
1958	123.8	155.9	107.3	129
1959	126.1	161.2	113.6	137
1960	131.7	161.2	112.5	135
1961	143.0	165.4	119.8	143
1962	154.3	202.0	127.1	161
1963	144.0	193.8	134.0	154
1964	142.9	199.2	123.0	155
1965	158 ^b

^ai.e., cost of living of the whole of Nigeria.

^b1965 average consumer index for six main cities was 117* (1960=100). This was corrected to the 1960 consumer index number of Appendix X, 1960=135. $\frac{135}{100} \times 117 = 158$

Sources: Columns 1-3: Helleiner, Peasant Agriculture, op. cit., p. 490.

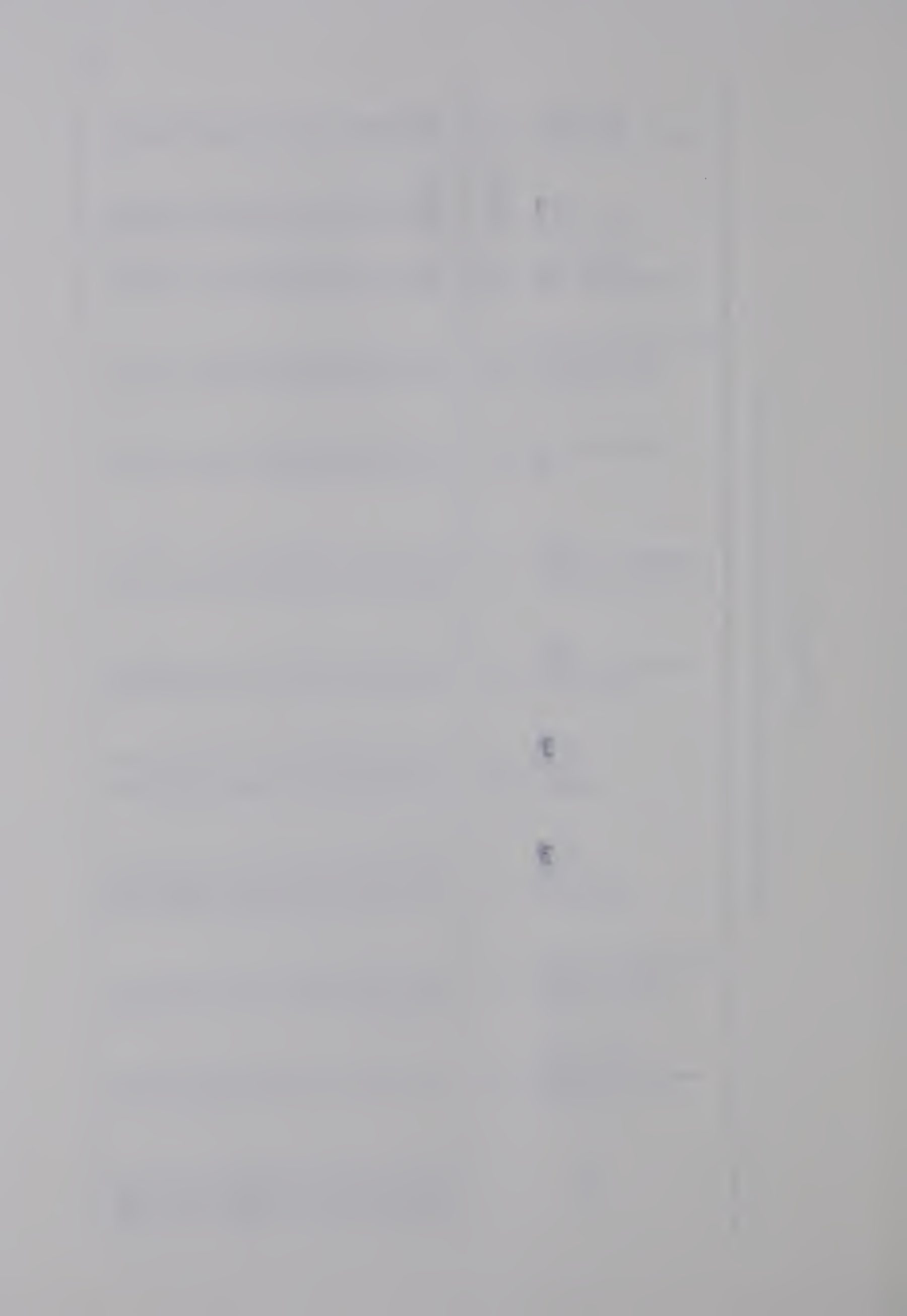
Column 4: average of columns 1-3.

* See Nigeria Year Book, 1968, p.88.

APPENDIX X

NIGERIA'S AGGREGATE IMPORT DEMAND 1950-65

Year	(1) Index of Import Volume 1963=100	(2) Index of Import Unit Value 1963=100	(3) Value of Imports £M	(4) Import Duty £M	(5) Corrected Import Prices (PM)	(6) Consumer Price Index 1948=100 (PN)	(7) PN 1965=100	(8) GDP at Factor Cost and 1957 Prices	(9) GDP Deflation 1950=100	(10) Real GDP £M	(11) Index of real 1965=100
1950	32	86	61.9	11.6	101	103	116	689	100	689	80
1951	35	107	84.6	14.7	125	134	110	741	104	713	83
1952	45	112	113.3	17.1	128	130	116	794	104	783	89
1953	48	100	108.2	20.0	119	120	117	812	110	738	86
1954	56	93	114.1	22.1	111	123	107	872	119	733	86
1955	70	92	136.1	26.7	110	121	108	895	124	722	84
1956	78	93	152.8	33.0	113	128	104	874	134	652	76
1957	76	95	152.5	32.9	117	129	108	910	134	679	79
1958	85	93	166.3	35.1	113	129	104	900	129	698	82
1959	93	91	178.4	40.1	112	137	97	939	129	718	85
1960	108	95	215.9	50.7	117	135	103	981	126	779	91
1961	110	95	222.4	61.7	121	143	101	1014	138	735	86
1962	103	94	203.2	55.6	120	161	88	1072	143	750	88
1963	100	100	207.6	61.6	129	154	100	1162	149	780	91
1964	120	103	253.9	78.8	129	155	98	1234	150	823	96
1965	121	107	275.2	66.6	133	158	100	1311	154	851	100



APPENDIX X--continued

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- Sources: Columns 1-4: United Nations, Yearbook of International Trade Statistics, 1967.
 Columns 1-2 (1965): International Monetary Fund, International Financial Statistics, December, 1967.
 Column 5: $PM = P \cdot \frac{V+D}{V}$ where PM=corrected price; P=original price index (column 2); V=value of imports (column 3); D=import duty (column 4).
 Column 6: Appendix IX.
 Column 7: Column 5 divided by column 6.
 Column 8: Adedeji, Nigerian Finance, op. cit., p. 37.
 Column 9 (1950-1962): Helleiner, Peasant Agriculture, op. cit., Table III-B-1.
 Column 9 (1963-1965): Appendix IX, col. 4 adjusted thus: (1963 = $\frac{154}{103} \cdot \frac{100}{1} = 149$);
 (1964 = $\frac{155}{103} \cdot \frac{100}{1} = 150$); (1965 = $\frac{158}{103} \cdot \frac{100}{1} = 154$).
 Column 10: Column 8 deflated by column 9.
 Column 11: Index of column 10 1965=100.

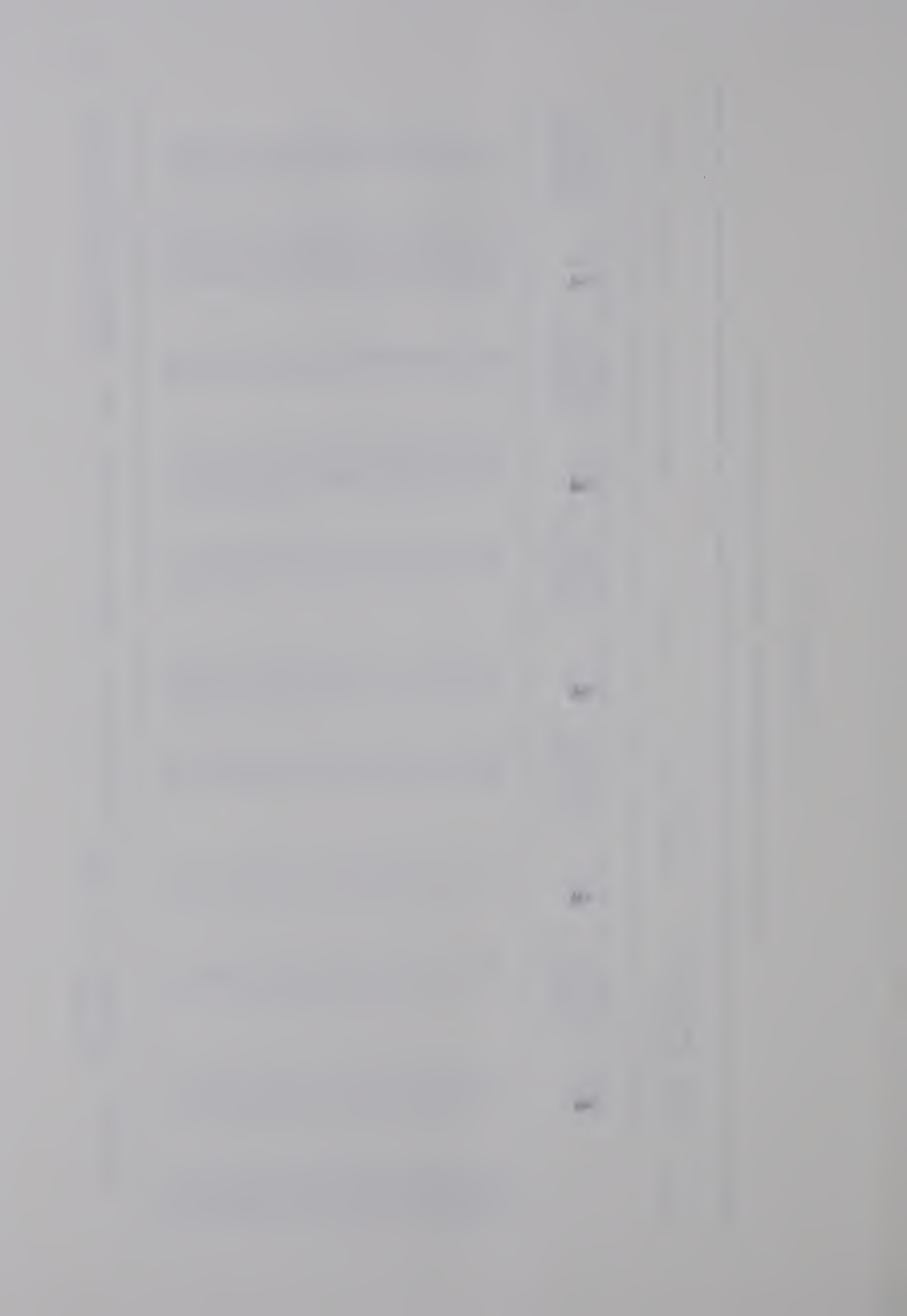
*For this formula see J. Hans Adler, "United States Import Demand During the Interwar Period," American Economic Review (June, 1945), 418-427.

APPENDIX XI

NIGERIA'S DISAGGREGATED IMPORT DEMAND 1950-65

Year	Food, Beverages and Tobacco		Crude Materials		Fuels		Manufactures		Capital Goods	
	Value £M	Index of Value Volume 1965=100	£M	Index of Value Volume 1965=100	£M	Index of Value Volume 1965=100	£M	Index of Value Volume 1965=100	£M	Index of Value Volume 1958=100
1950	6.3	25	1.3	24	4.0	30	37.8	38	10.9	30
1951	9.6	38	2.2	34	5.9	36	53.2	43	12.3	28
1952	10.8	43	2.4	36	6.6	39	72.9	57	18.7	41
1953	14.0	56	2.1	34	5.7	36	65.9	56	17.9	43
1954	16.4	66	1.5	26	5.6	38	68.4	62	20.1	52
1955	18.1	72	1.7	30	6.5	45	79.5	73	27.9	72
1956	21.3	85	1.9	34	7.3	49	87.1	78	32.3	81
1957	23.8	95	1.9	32	8.2	53	84.2	73	31.3	76
1958	23.7	95	2.0	34	8.9	60	89.7	80	39.4	100
1959	26.6	106	2.1	36	10.4	70	93.8	85	43.8	112
1960	30.1	120	2.1	36	11.3	73	117.2	101	51.6	126
1961	28.8	115	2.5	40	13.4	84	123.8	104	50.4	119
1962	28.1	112	2.4	40	14.1	90	107.1	90	48.3	104
1963	24.8	99	4.2	65	15.5	92	109.0	85	50.5	111
1964	23.5	94	5.0	77	19.5	116	127.8	100	74.9	106
1965	25.0	100	6.6	100	17.3	100	130.7	100	92.4	199

Sources: Columns 1,3,5,7,9 (1950-1953): Robson and Lury, eds., Economies of Africa,
op. cit., p. 181.



APPENDIX XI--continued

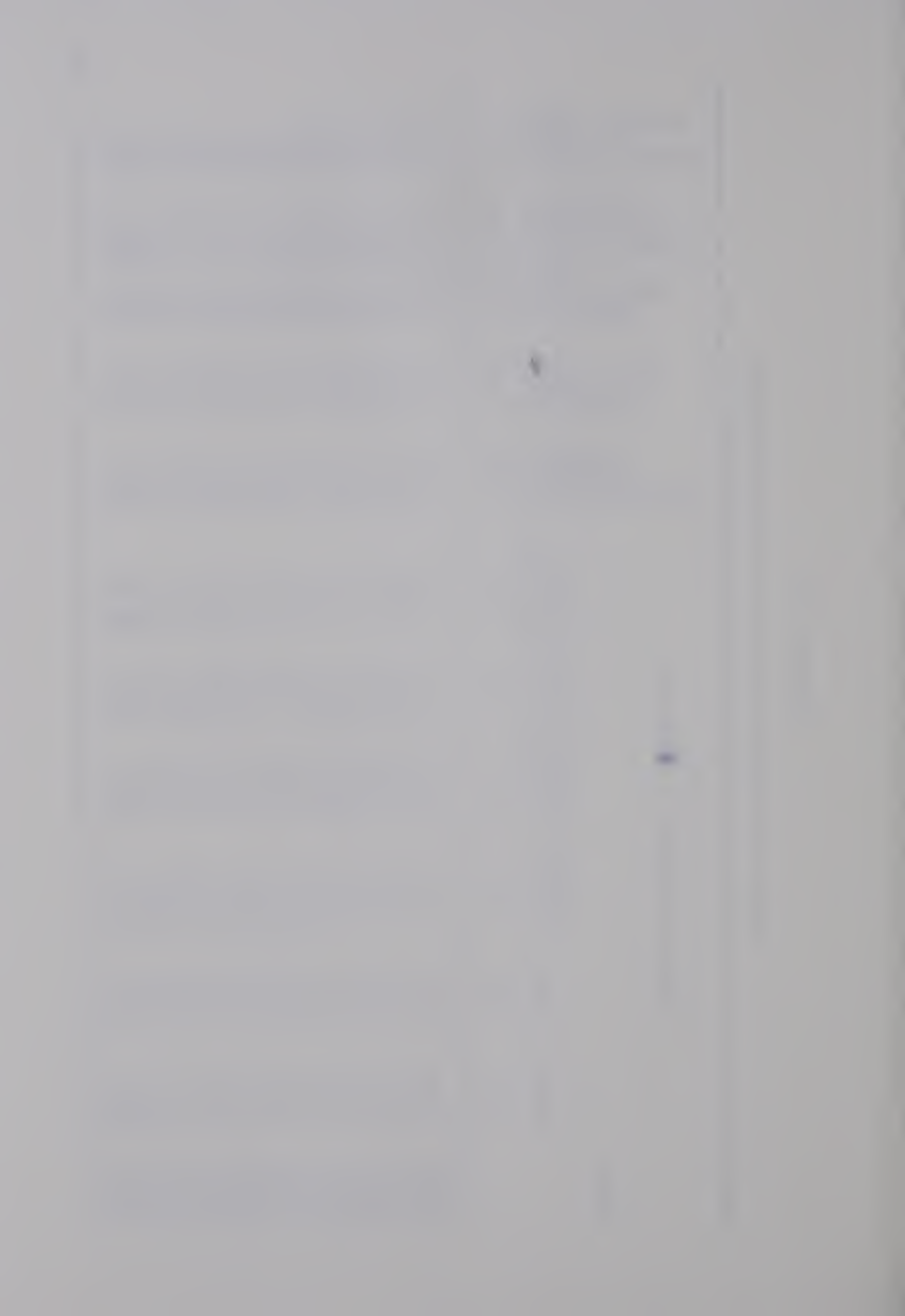
Columns 1,3,5,7,9 (1954-1965): United Nations, Yearbook of International Trade Statistics, 1956, 1959, 1962, 1963 and 1967.

Columns 2,4,6,8,10: Index of the value of each category (i.e., columns 1.3.5.7.9) deflated by corrected import prices (Appendix XI, column 5).

APPENDIX XII

VALUE AND RELATIVE PRICES OF NIGERIAN EXPORTS

Year	Value of Exports in £ Million						Unit Value of Exports 1963=100	Nigeria's Export Duty M	Corrected Export Price (Px)	Index of World Export Price 1963=100	Relative Price (Px) 1965=100
	France	Italy	Nether- lands	United Kingdom	United States	West Germany					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1950	0.3	0.1	1.5	68.5	13.2	1.1	87	4.2	92	97	95
1951	1.8	1.2	1.8	88.9	15.9	2.8	118	10.8	130	112	116
1952	0.3	1.2	2.2	91.9	14.8	2.6	123	14.6	143	104	137
1953	0.3	1.3	3.2	97.0	14.3	2.5	107	12.8	121	100	121
1954	2.3	3.4	9.6	106.3	15.7	4.5	119	21.3	147	103	142
1955	3.2	3.2	10.0	90.8	12.1	4.3	105	13.9	120	99	121
1956	1.0	6.1	13.4	85.3	12.6	5.6	99	13.5	118	100	118
1957	5.4	6.4	12.5	78.4	7.6	6.0	100	12.1	117	102	114
1958	2.0	8.4	18.2	74.9	8.1	11.0	101	14.7	121	97	124
1959	4.9	7.4	25.9	82.1	11.8	13.3	106	18.4	129	82	151
1960	6.4	7.2	21.5	79.7	15.9	12.9	107	15.5	127	89	141
1961	9.7	8.2	21.8	76.2	19.1	13.2	100	13.4	117	92	125
1962	6.7	8.8	22.4	70.4	18.1	14.7	95	12.1	113	95	118
1963	15.9	9.6	22.0	73.8	17.3	17.2	100	13.5	110	100	110
1964	10.0	7.5	27.1	80.7	14.3	26.9	102	14.4	120	106	113
1965	18.2	10.9	31.5	101.5	26.2	27.9	104	15.9	119	109	109



APPENDIX XII--continued

Sources: Columns 1-8: United Nations, Yearbook of International Trade Statistics 1951, 1955, 1959, 1963 and 1967.
Column 2 (1965): International Monetary Fund, International Financial Statistics, December, 1967.
Column 9: $P_x = P \cdot \frac{V + D}{V}$ where P_x =corrected price;
P = original price index (column 7); V = value of exports; D = export duty (column 8).
Column 10: United Nations, Statistical Yearbook, 1967.
Column 11: Column 9 divided by column 10.

APPENDIX XIII

GROSS NATIONAL PRODUCT OF NIGERIA'S PRINCIPAL CUSTOMERS

Year	France		Italy		Netherlands		United Kingdom		United States		West Germany	
	GNP at Current Market Prices	GNP at Market Prices of 1959	GNP at Current Market Prices	GNP at Market Prices of 1963	GNP at Current Market Prices	GNP at Market Prices of 1958	GNP at Current Market Prices	GNP at Market Prices of 1958	GNP at Current Market Prices	GNP at Market Prices of 1963	GNP at Current Market Prices	GNP at Market Prices of 1954
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	(Thousand Million Francs)	(Thousand Million Lire)	(Thousand Million Guilders)	(Thousand Million Pounds)	(Thousand Million Dollars)	(Thousand Million Dollars)	(Thousand Million Pounds)	(Thousand Million Pounds)	(Thousand Million Dollars)	(Thousand Million Dollars)	(Thousand Million Mark)	(Thousand Million Mark)
1950	96	132	8658	9957	19560	22750	12872	11666	331	342	92	118
1951	119	137	10048	10719	21740	22350	14379	12782	350	356	120	125
1952	141	141	10654	11028	22930	22950	15717	13861	372	371	134	133
1953	152	207	11663	11876	24260	24800	17080	20416	370	450	147	147
1954	154	218	12469	12469	26650	26650	17982	15718	365	365	154	154
1955	172	227	14641	19104	20176	33700	19277	22066	404	376	180	177
1956	191	240	15908	19969	32568	34860	20884	22480	425	485	199	189
1957	213	253	17081	21045	35364	35960	22077	22918	448	493	216	200
1958	245	260	18340	22080	35930	35930	23034	23034	455	489	232	207
1959	267	267	19437	23512	38443	37790	24210	23969	491	518	251	221

APPENDIX XIII--continued

Year	France		Italy		Netherlands		United Kingdom		United States		West Germany	
	GNP at Current Market Prices	GNP at Market Prices of 1959	GNP at Current Market Prices	GNP at Market Prices of 1963	GNP at Current Market Prices	GNP at Market Prices of 1958	GNP at Current Market Prices	GNP at Market Prices of 1958	GNP at Current Market Prices	GNP at Market Prices of 1963	GNP at Current Market Prices	GNP at Market Prices of 1954
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	(Thousand Million Francs)	(Thousand Million Lire)	(Thousand Million Guilders)	(Thousand Million Pounds)	(Thousand Million Dollars)	(Thousand Million Mark)						
1960	296	287	21071	24993	42732	44160	25659	25127	511	531	297	255
1961	320	301	23363	26945	45288	42620	27406	25993	529	542	326	269
1962	356	320	26330	28618	48517	44250	28738	26252	570	577	355	280
1963	396	337	30193	30193	52858	45870	30505	27417	600	600	378	289
1964	435	356	33112	30115	61830	49900	32994	28898	642	631	414	309
1965	461	369	35460	32084	68650	52580	35351	29669	692	668	449	322

Sources: Columns 1-12: United Nations, Yearbook of National Accounts Statistics, 1957, 1966.
 Columns 7 and 8 (1950-1952, 1954): Central Statistical Office, Annual Abstract of Statistics (London: Her Majesty's Stationery Office, 1955), Table 290.

APPENDIX XIV

INDICES OF EXPORT VOLUME AND REAL GNP OF NIGERIA'S PRINCIPAL CUSTOMERS

Year	France		Italy		Netherlands		United Kingdom		United States		West Germany	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Index of Export Volume	Index of real GNP 1959=100	Index of Export Volume 1961=100	Index of real GNP 1963=100	Index of Export Volume 1959=100	Index of real GNP 1958=100	Index of Export Volume 1965=100	Index of real GNP 1965=100	Index of Export Volume 1962=100	Index of real GNP 1954=100	Index of Export Volume 1957 = 100	Index of real GNP 1954=100
1950	6	36	3	30	8	54	90	68	89	90	24	60
1951	26	44	12	35	6	60	80	70	76	95	42	77
1952	4	54	11	37	8	64	74	71	64	100	36	87
1953	6	56	15	41	13	67	94	74	73	101	40	95
1954	32	57	32	44	32	74	84	77	66	100	60	100
1955	52	64	38	48	41	84	88	84	63	110	86	116
1956	16	71	74	53	106	90	84	91	66	116	94	129
1957	92	78	78	57	108	98	78	96	40	122	100	140
1958	32	91	100	61	75	100	72	100	41	124	192	150
1959	76	100	81	64	100	106	74	105	56	134	204	162
1960	100	110	80	70	84	118	73	111	77	140	202	192
1961	166	119	100	77	93	126	74	119	101	144	224	211
1962	120	133	111	87	94	135	73	125	100	156	260	230
1963	292	148	124	100	98	147	78	132	98	164	310	245

APPENDIX XIV --continued

Year	France		Italy		Netherlands		United Kingdom		United States		West Germany	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Index of Export Volume 1960=100	Index of real GNP 1959=100	Index of Export Volume 1961=100	Index of real GNP 1963=100	Index of Export Volume 1959=100	Index of real GNP 1958=100	Index of Export Volume 1965=100	Index of real GNP 1965=100	Index of Export Volume 1962=100	Index of real GNP 1954=100	Index of Export Volume 1957=100	Index of real GNP 1954=100
1964	166	162	88	110	112	172	78	143	74	175	448	275
1965	306	172	131	117	132	191	100	154	137	189	468	291

Sources: Columns 1, 3, 5, 7, 9, and 11: Each of columns 1-6 of Appendix XII divided by column 9 of Appendix XII.
 Columns 2, 4, 6, 8, 10, and 12: Calculated from Appendix XIII using the base year in each case. E.g., United Kingdom (columns 7 and 8 of Appendix XIII) with 1958 as base year.
 $1958 = \frac{23034}{23034} = 100$

$$1959 = \frac{24210}{23034} \cdot \frac{100}{1} = 105 \text{ etc.}$$

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